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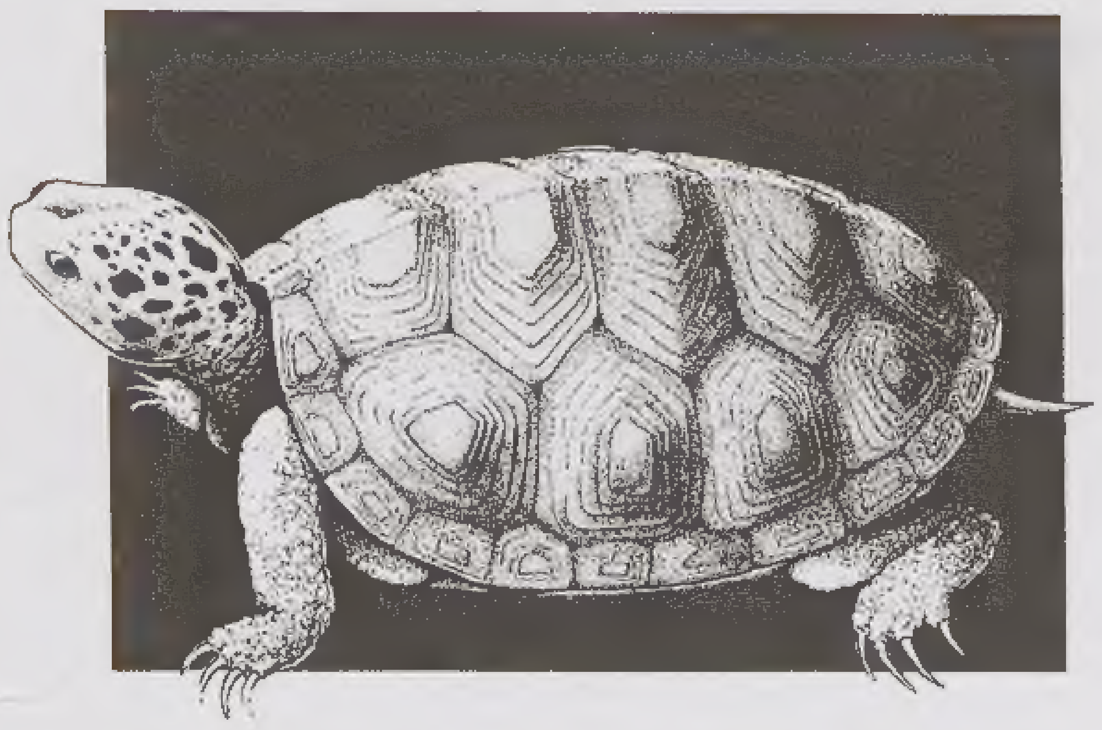

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A HISTORY

OF

BRITISH FOSSIL REPTILES.

BY

SIR RICHARD OWEN, K.C.B., F.R.S., ETC.,
FOREIGN ASSOCIATE OF THE INSTITUTE OF FRANCE (ACADEMY OF SCIENCES).

VOL. II.

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Vol. II., INDEX, p. iii.—"Plate 19 A" was cancelled.
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Ib. *ib.* *ib.* "Plate 25, *Cetiosaurus*," was cancelled.
Ib. *ib.* p. viii.—For "Plate 59" read "49."

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[1] This genus is *Dinosaurian*.

[2] This genus is *Sauropterygian*.

[3] This genus is *Dinosaurian*.

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[1] Probably *Iguanodon Foxii.*

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(The fossil subjects of the above cuts, from a 'Greensand' formation at Hythe, were referred to the genus *Polyptychodon*, of which, at the date of the impressions of pp. 201—209, the teeth only were known. Subsequent discoveries have shown those teeth to belong to the genus *Pliosaurus*. The present fossils represent the Dinosaurian species "*Dinodocus Mackesoni*," under which name they are exhibited in the Palæontological Series, British Museum of Natural History. The Cuts, 16—26, are numbered 1—11, in Vol. I.)

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PLATE 1

Chelone breviceps, four-fifths nat. size.

Fig.

1. Upper view of the carapace.
2. Under view of the plastron.
3. Side view of the cranium: 7, parietal; 8, mastoid; 11, frontal; 12, post-frontal; 21, maxillary; 26, malar; 27, squamosal; 28, tympanic.
4. Transverse section of the carapace and plastron.

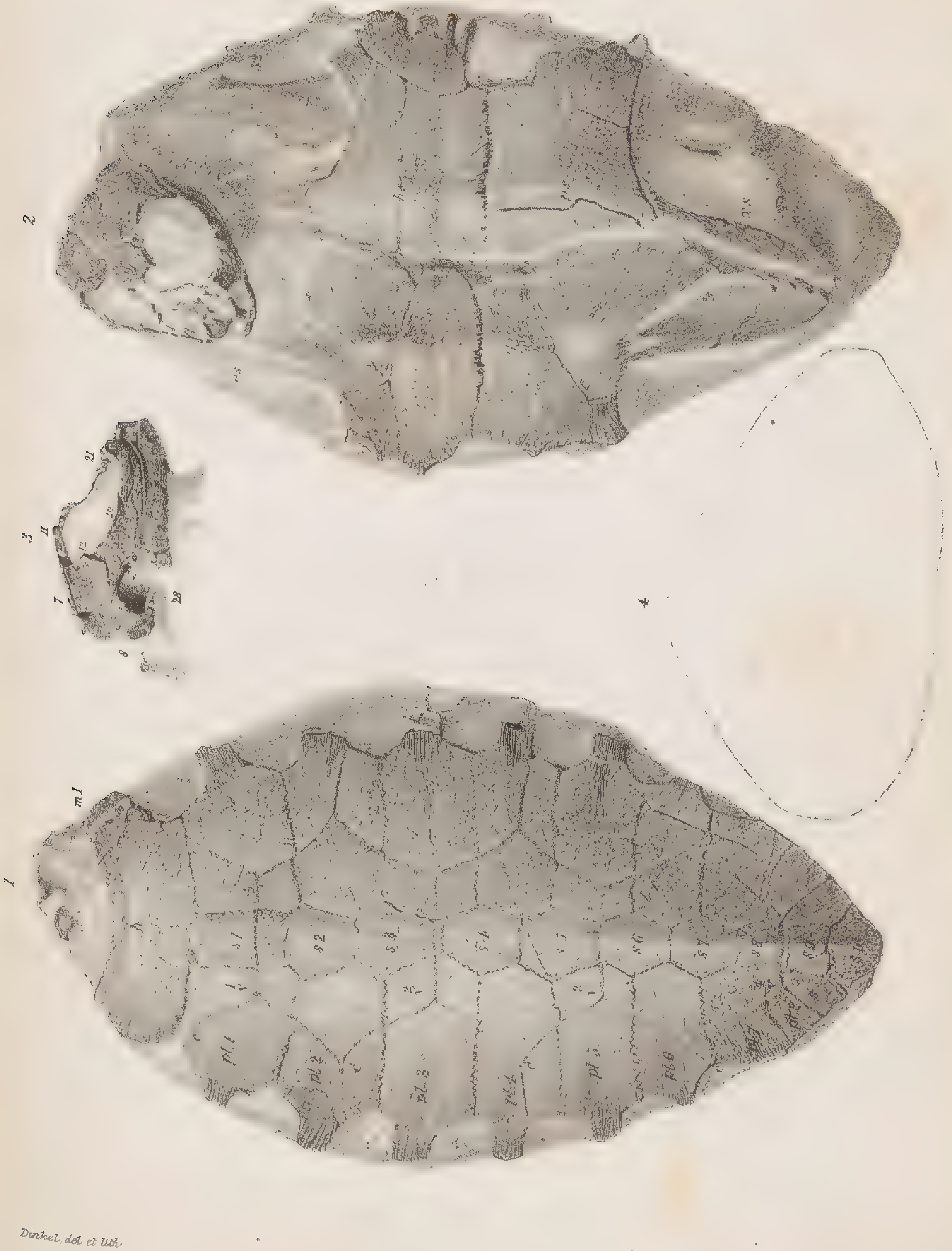
s 1 to *s* 10. The first to the tenth neural plate inclusive.

pl 1 to *pl* 8. The first to the eighth costal plates.

v 1 to *v* 4. Impressions of the first to the fourth vertebral scutes.

c, *c*. Impressions of the costal scutes.

es. Episternum. *hs*. Hyosternum. *ps*. Hyposternum. *xs*. Xiphisternum.



Dinkel del. et lith.

Day & Son lith^rs to the Queen

Chelone breviceps.

Plate 2.

Emys Comptoni, nat. size.

Fig.

1. Upper view of the carapace.
   ch. Nuchal plate.
   *s*1—*s*10. The first to the tenth neural plates inclusive.

2. Under view of the plastron.
   s. Entosternal.
   es. Fractured episternal.
   hs. Hyosternal.
   ps. Hyposternal.
   xs. Xiphisternal.

3. Side view, showing four of the marginal plates, *m*4—*m*7.

4. Front view.

5. Back view.

Emys Comptoni.

Day & Son, lith[rs] [illegible]

Dinkel del et lith.

PLATE 3.

Emys lævis, two thirds the nat. size.

Fig.

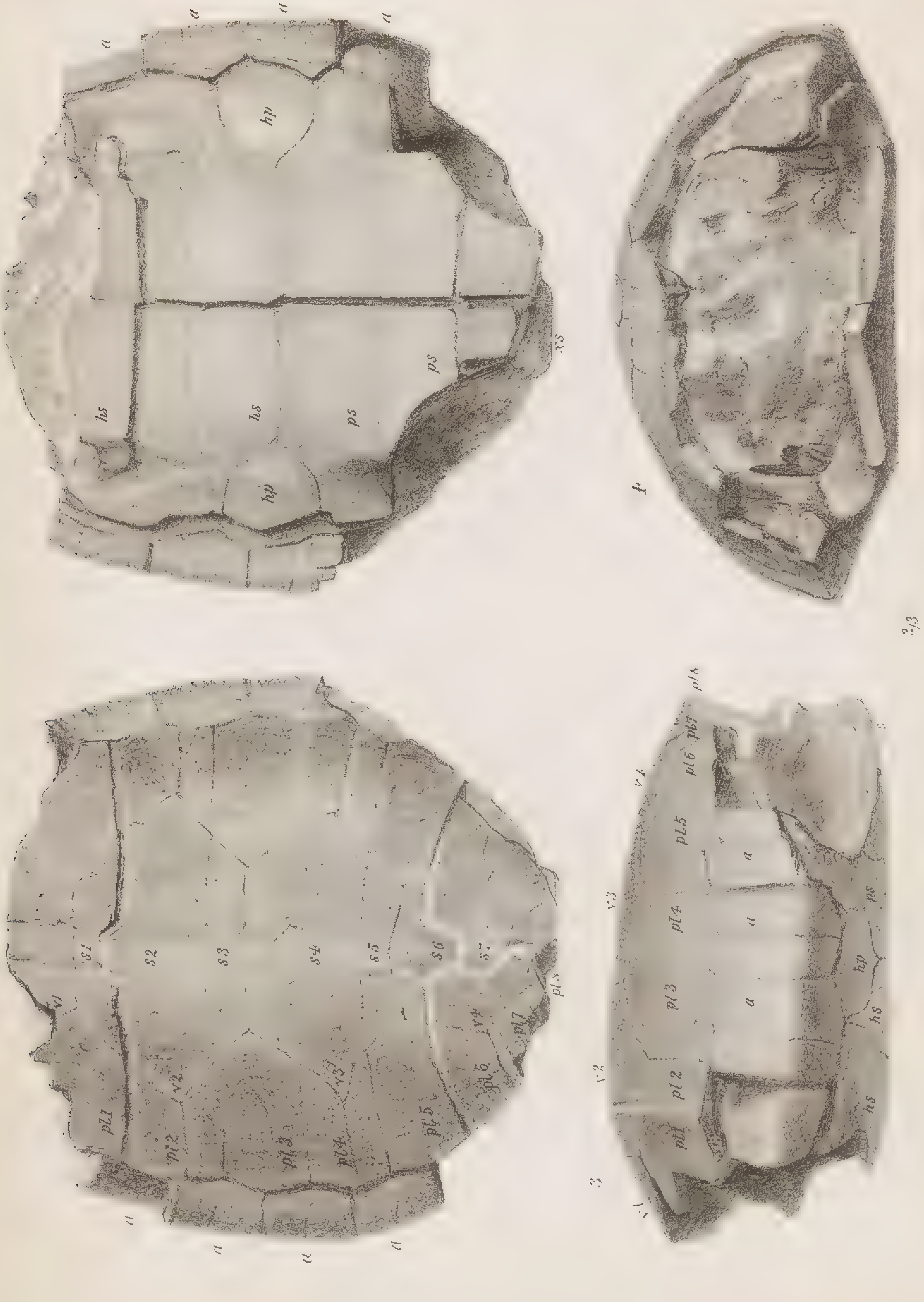
1. Upper view of carapace.

2. Under view of plastron.

3. Side view

4. Front view, showing the curvature and depth of the specimen.

The letters and figures signify the same parts as in the preceding Plate; *hp*, the accessory pieces of the plastron (fig. 2).



Emys lævis.

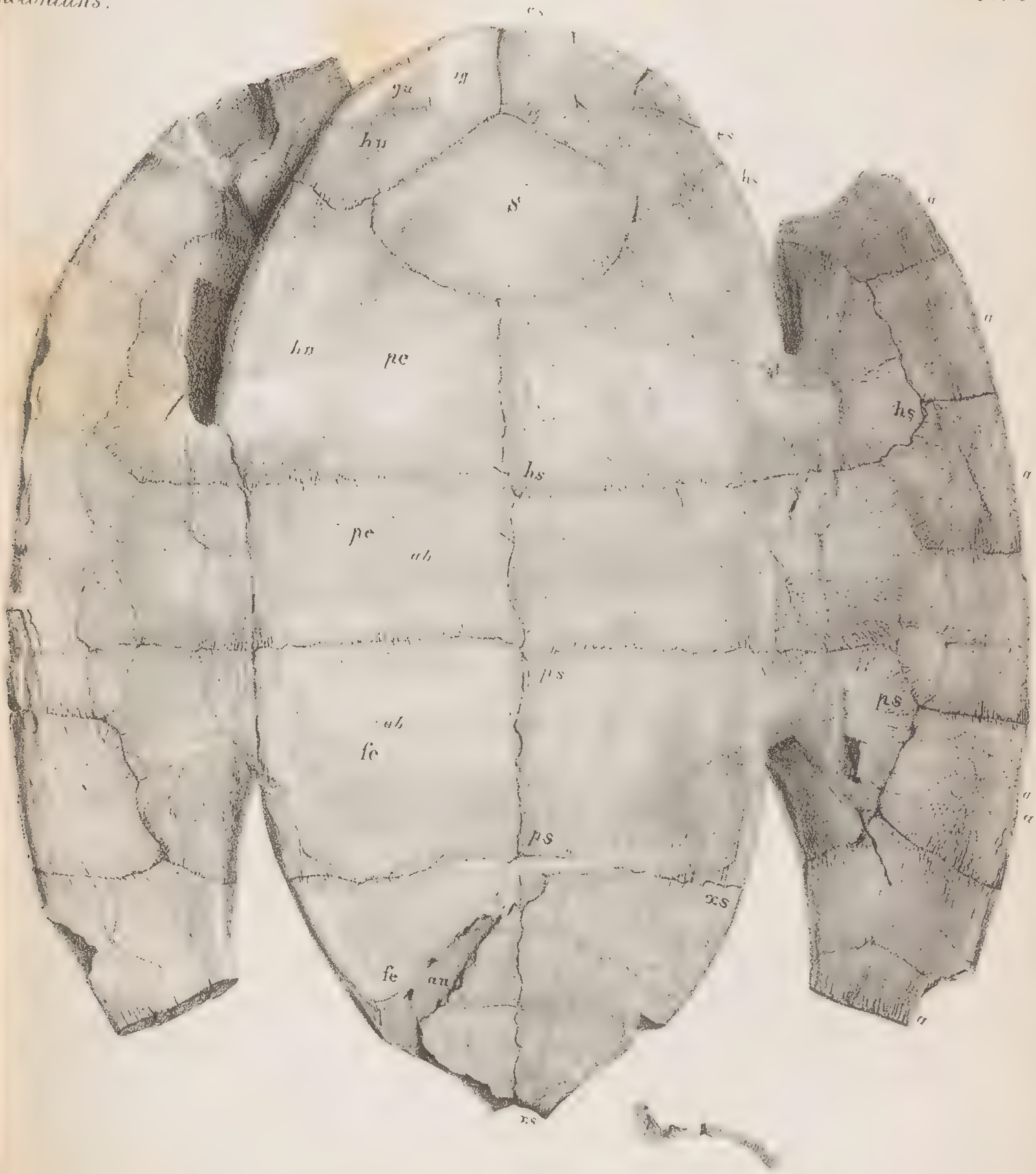
Plate 4.

Platemys Bullockii, half the nat. size.

The plastron and some of the marginal plates, *a a.*

s. Entosternal.
es. Episternals.
hs. Hyosternals.
ps. Hyposternals.
xs. Xiphisternals.
ig. Intergular scute.
gu. Gular scutes.
hu. Humeral scutes.
pe. Pectoral scutes.
ab. Abdominal scutes. The impression between these and the pectoral scutes crosses the intercalated supernumerary bones between the hyosternals and hyposternals.
fe. Femoral scutes.
an. Anal scute.

Where the bones or scutes are in pairs, the figures or letters are placed on one of each pair.



Platemy's Bullockii

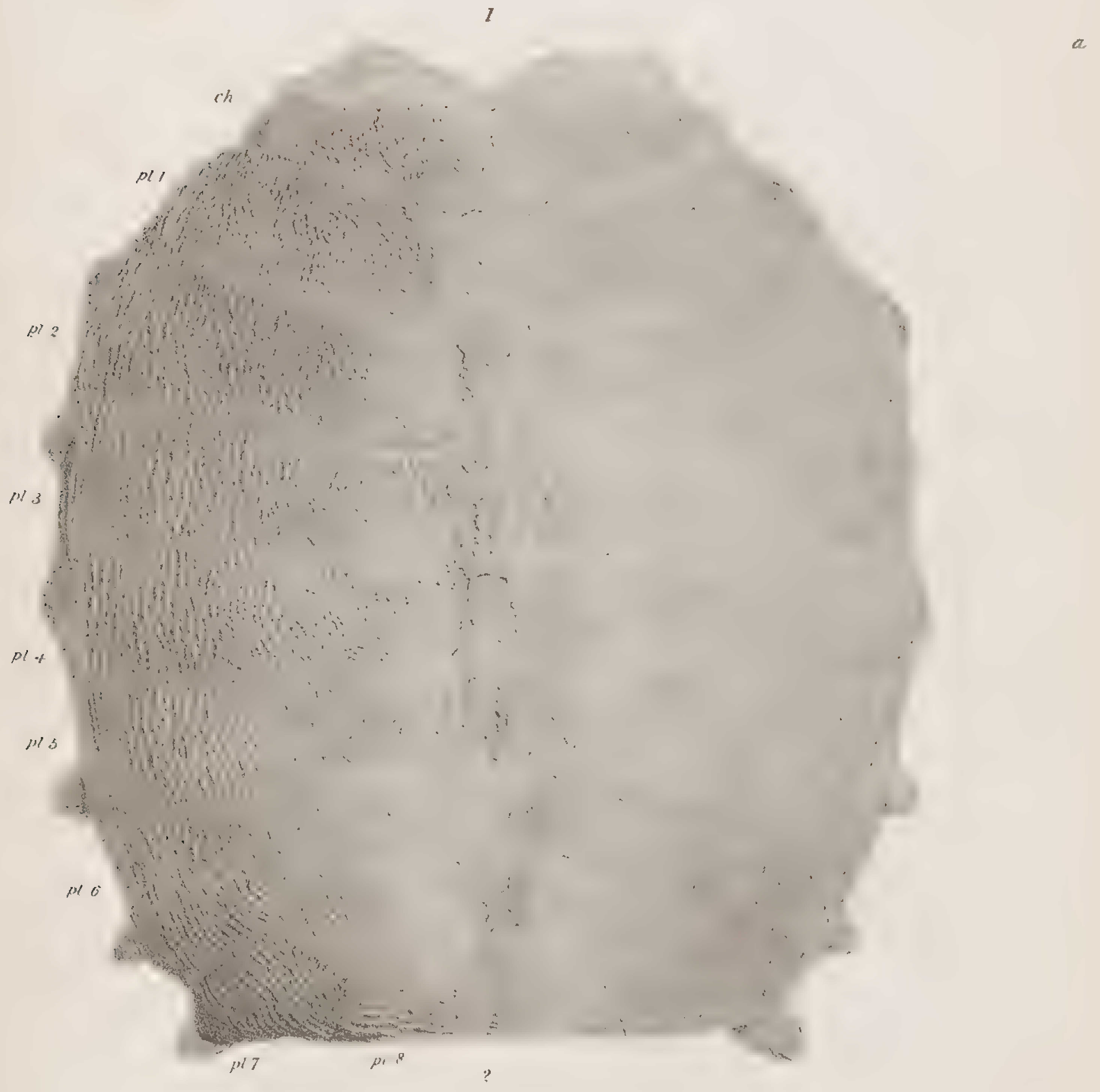
Plate 5.

The carapace of the *Trionyx Barbaræ*, half nat. size.

ch. The nuchal plate.

pl. 1—8. The costal plates.

a, Shows the longitudinal contour of the middle of the upper surface, and fig. 2, the transverse curvature of the carapace.



...m Nature on Stone by J. Erxleben
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Trionyx Barbaræ.

Plate 6.

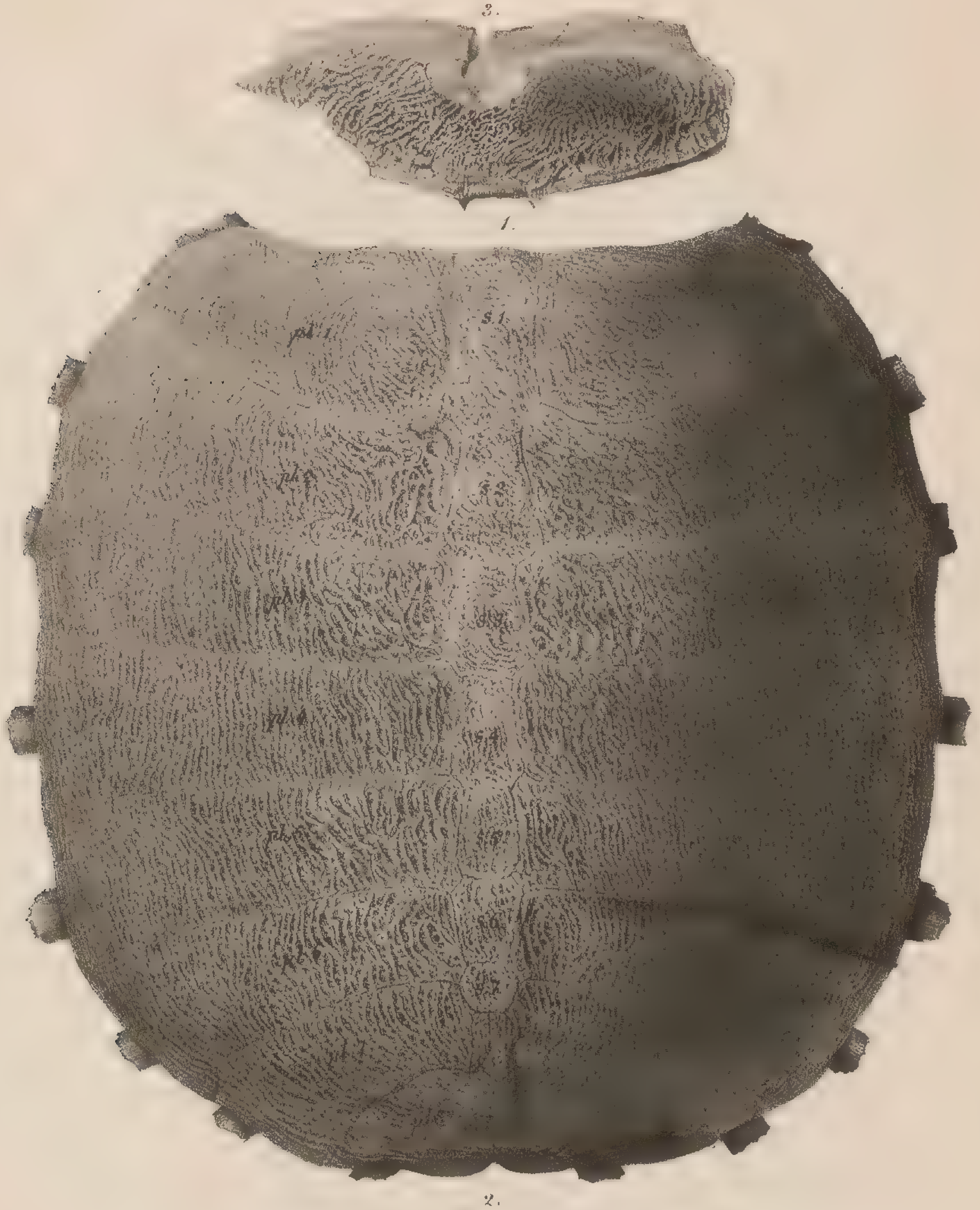
Trionyx Henrici.

Fig.

1. Upper view of the carapace, wanting the nuchal plate, half nat. size.
   *s*1—*s*7. The first to the seventh neural plates inclusive.
   *pl*1—*pl*8. The eight costal plates of the left side.

2. Outline of the transverse curvature of the upper surface of the carapace.

3. The nuchal plate of probably the same species of *Trionyx;* but of another individual: half the natural size.



J. Erxleben on Zinc

Day & Son Lithogr to the Queen

Figs. 1 2. Trionyx Henrici. ½ nat. size.

Plate 7.

Chelone planimentum.

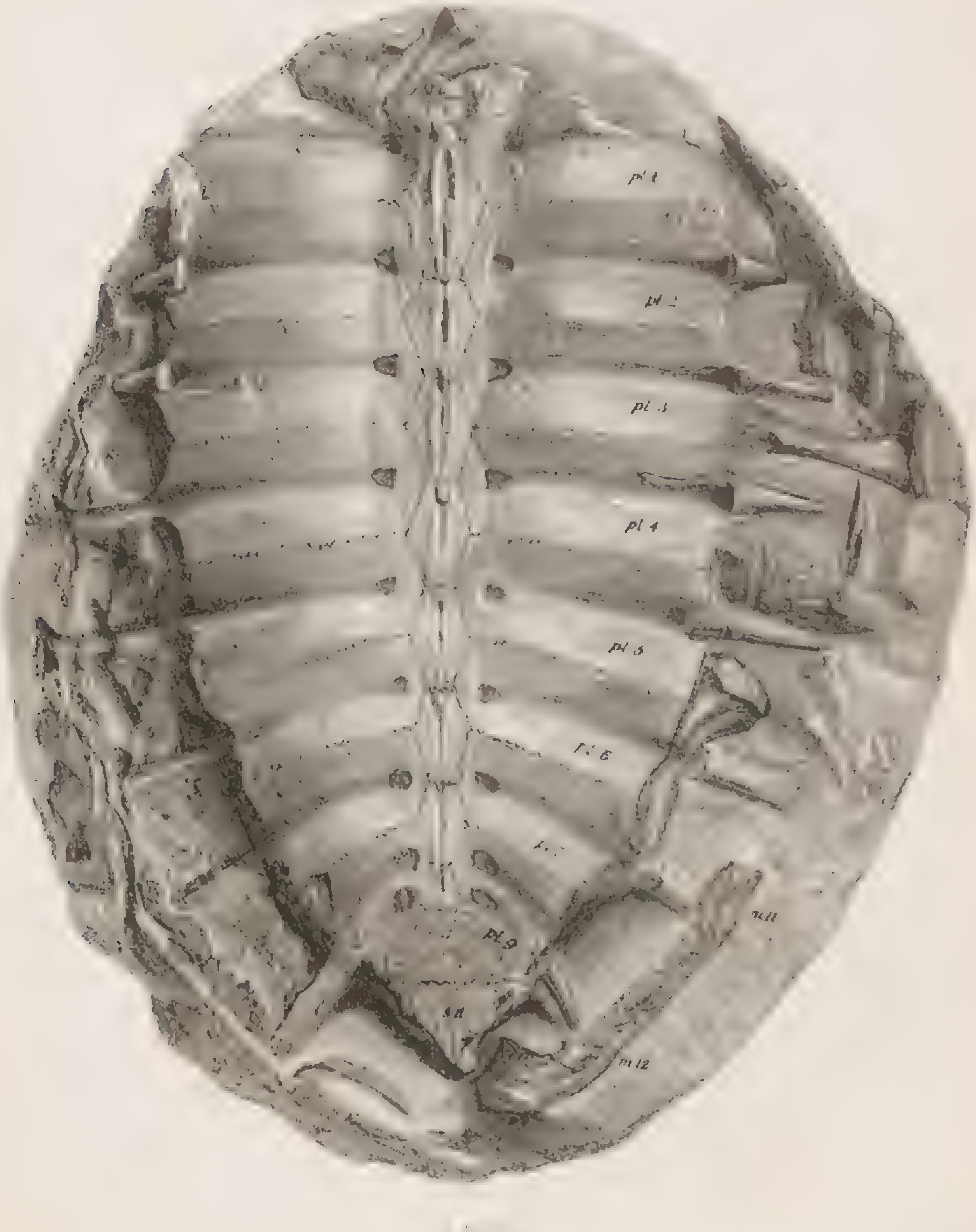
View of a cast of the under or inner surface of the carapace; with portions of the ribs and marginal plates: one third the natural size.

*pl*1—*pl*8. Impressions of the costal plates and ribs.

*m*11, *m*12. The eleventh and twelfth marginal plates.

*s*11. The eleventh neural plate.

py. The pygal plate.



Chelone planimentum

Plate 8.

Chelone planiceps, nat. size (from Portland stone).

Fig.

1. Front view of skull.

2. Side view.
   - *a*. Premaxillary.
   - *b*. Maxillary.
   - *c*. Nasal (here distinct from).
   - d_1. Prefrontal.
   - *d*. Frontal.

3. Top view.
   - d_2. Postfrontal.

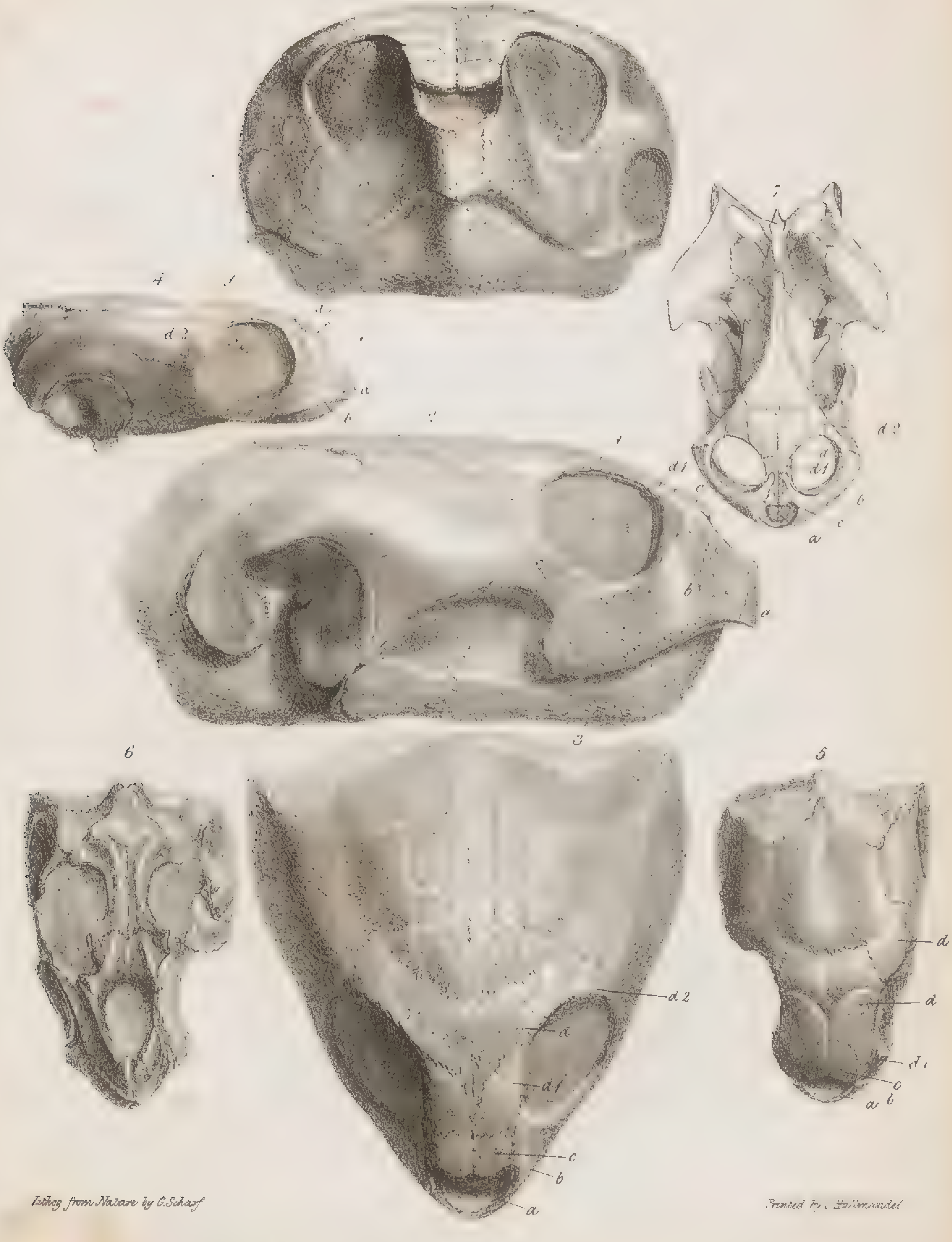
Chelone pulchriceps, nat. size (from chalk).

4. Side view of skull.

5. Top view: the letters indicate the same bones as in figs. 2 and 3.

6. Base view.

7. Top view of the skull of a recent Chelonian (*Hydromedusa*, Wagler), with the nasals (*c*) and prefrontals (d_1) distinct, as in the fossils.



Lithog. from Nature by G. Scharf

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1 2 3. Chelone planiceps. 4 5 6. Chelone pulchriceps

Plate 9.

Chelone obovata, half the nat. size (from Swanage).

Fig.

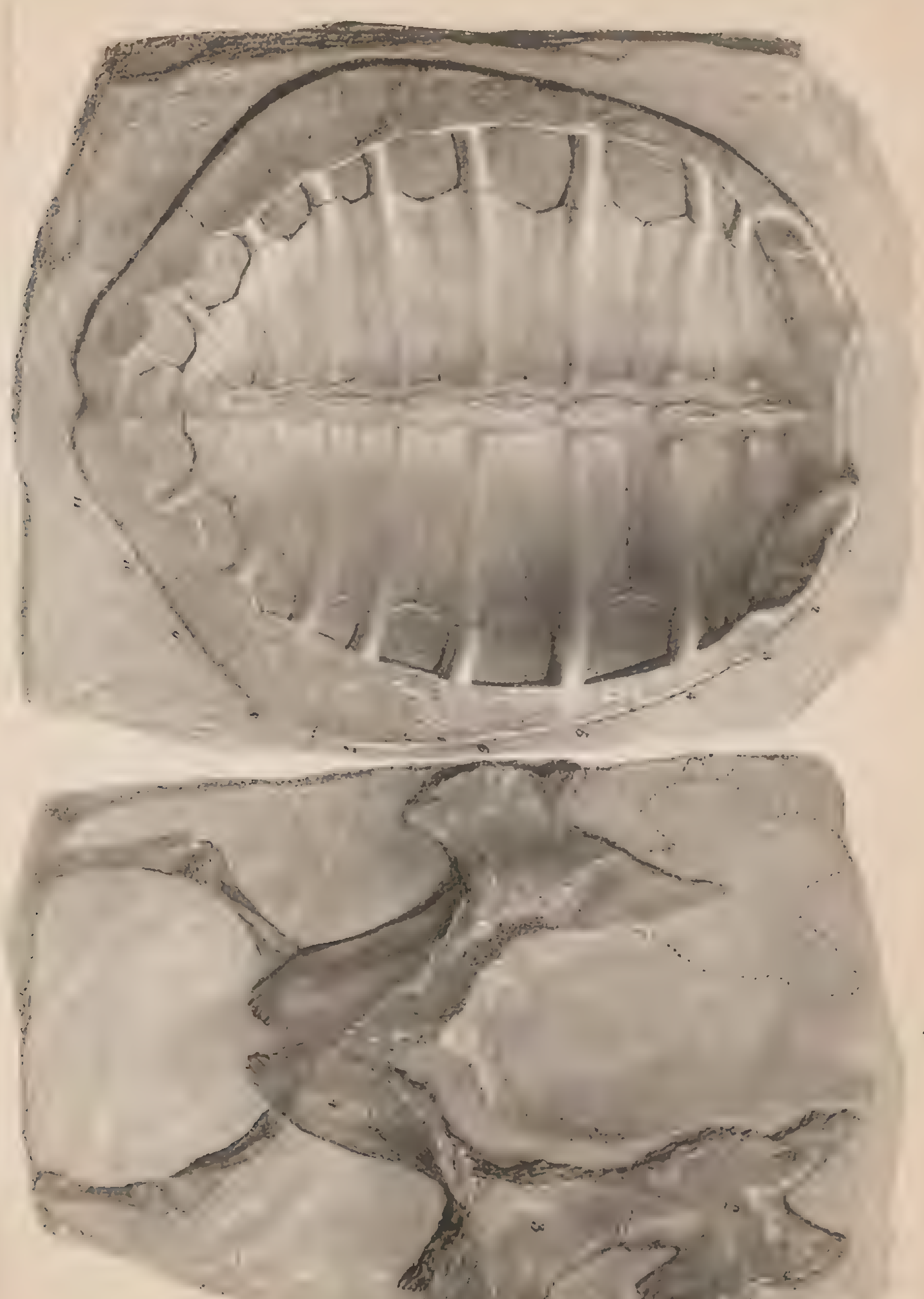
1. Inside or under view of the carapace, with the nuchal and pygal, and all the marginal plates, 1—11.

2. A similar view of the mutilated plastron.

   2. Hyosternal.

   3. Hyposternal.

   4. Xiphisternal.



Chelone obovata.

Plate 10.

Chelone subcarinata.

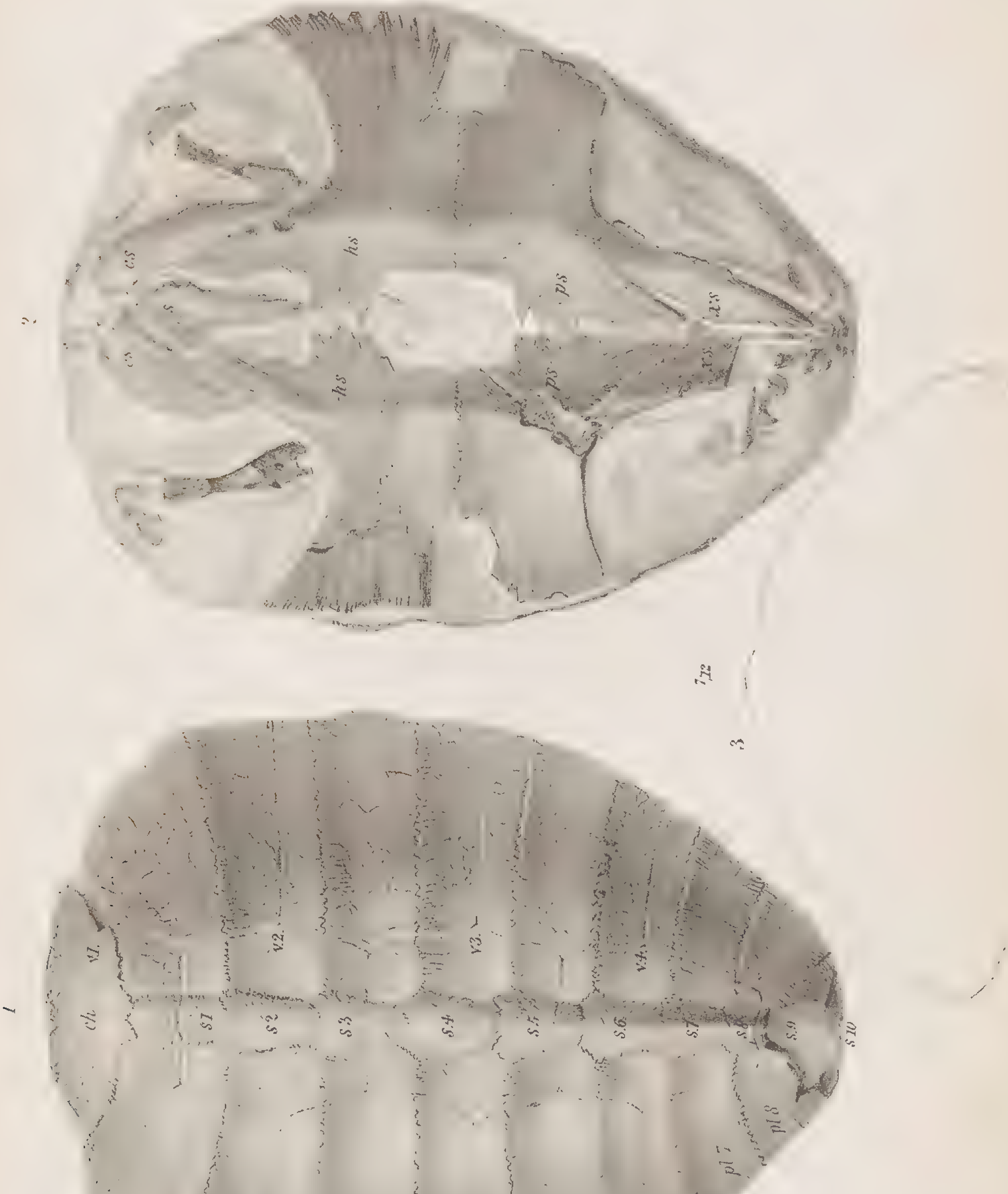
Fig.

1. Upper view of the carapace, seven twelfths of the natural size.

2. Under view of the plastron of the same specimen.

3. Outline of the transverse contour of the carapace.

The letters and figures are explained in the text.



Chelone subcarinata.

Plate 11.

Skull of *Chelone cuneiceps*, nat. size.

Fig.

1. Side view.

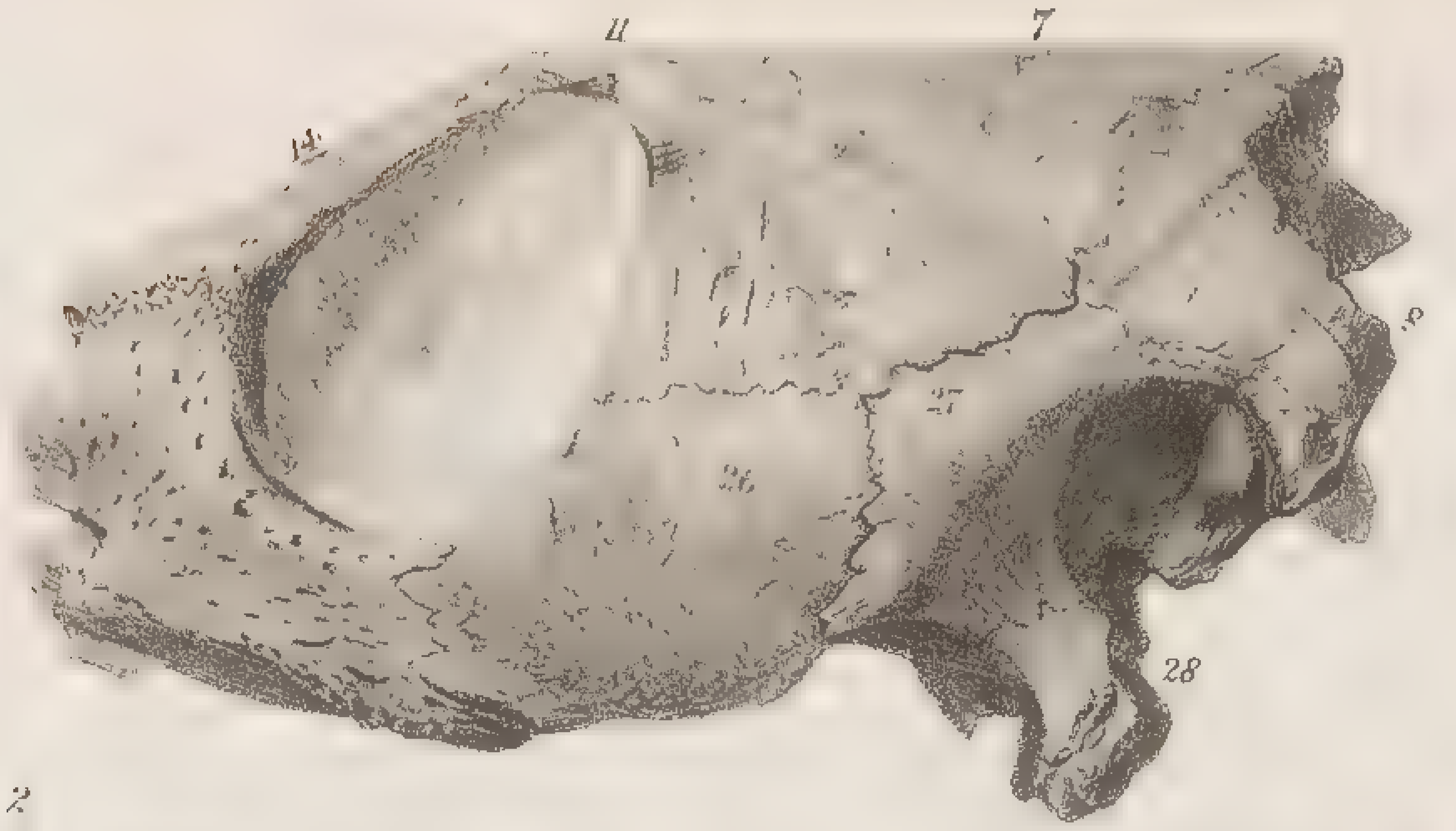
2. Top view.

3. Base view.

4. Back view.

The letters and numerals indicate the same parts as in Plates 12 and 17*A*.

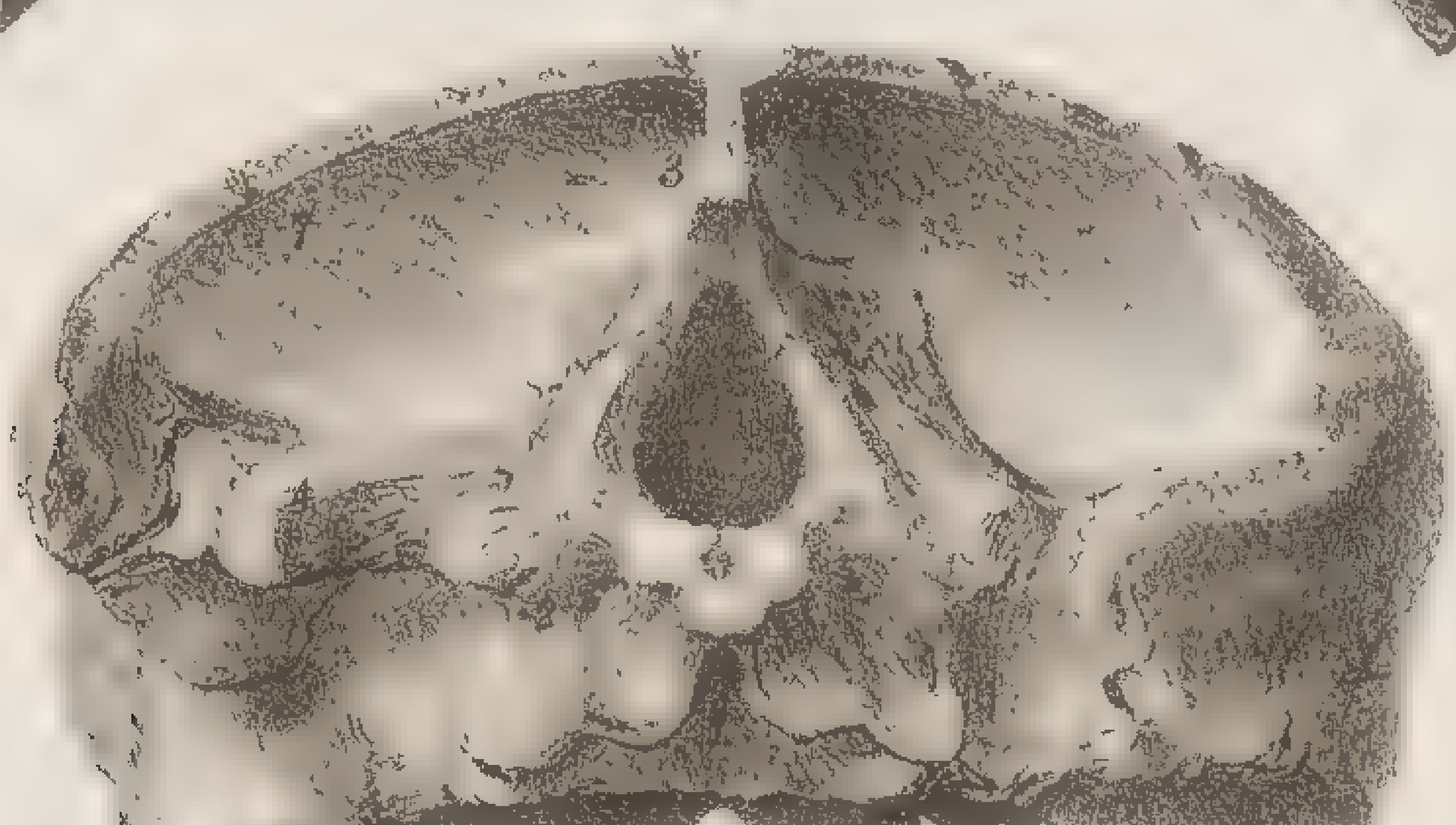
1



2

3

4



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Chelone cuneiceps.

Plate 12.

Skull of *Chelone longiceps*, nat. size.

Fig.
1. Side view.
2. Top view.
3. Base view.
4. Back view.

The same numerals indicate the same bones as in Plate 17*A*.

13, 13. Vomer.
20. Palatine.
22. Premaxillary.
24. Pterygoid.

The following perishable parts are indicated by the impressions left on the bone:

fr. The frontal scute.
sy. The sincipital scute.
io. The inter-occipital scute.
oc. The occipital scute.
ol. The occipito-lateral scute.
pa. The parietal scute.
ob. The supraorbital scute.
fn. The frontonasal scute.

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Chelone longiceps.

Plate 13.

Chelone longiceps.

Fig.

1. Upper view of the carapace, two thirds of the natural size.
   1. Nuchal plate.
   2—11. Neural plates.

2. Under view of the plastron, two thirds nat. size.
   9. Entosternal.
   1. Episternals.
   2. Hyosternals.
   3. Hyposternals.
   4. Xiphisternals.

Plate 14.

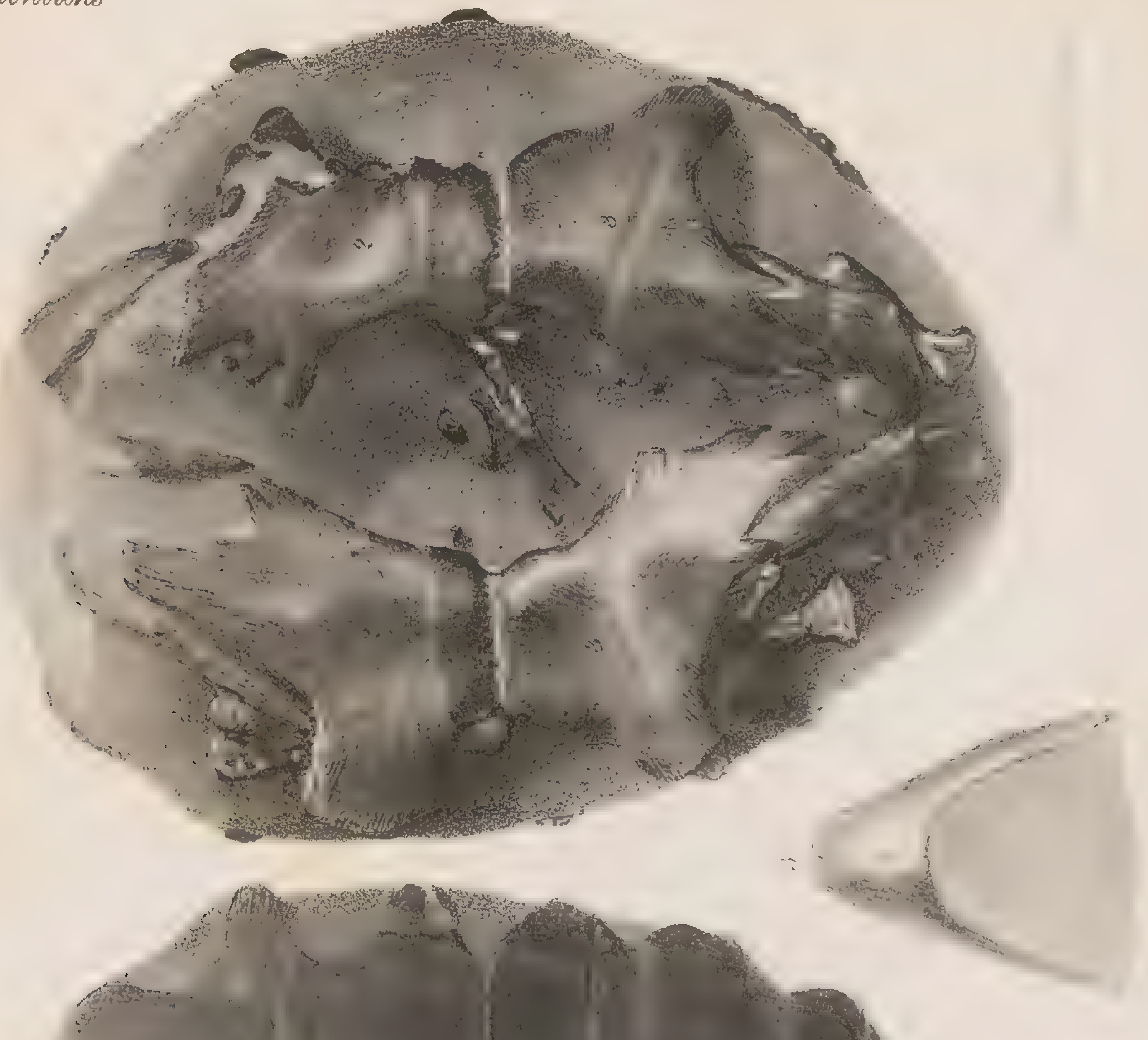
Chelone convexa.

Fig.

1. Upper view of the carapace, nat. size.

2. Under view of the plastron, nat. size.

3. Under view of the symphysis and part of the rami of the lower jaw.



Chelone convexa

PLATE 15.

Chelone subcristata.

Fig.

1. Upper view of the carapace, three fifths of the natural size.

2. Under view of the plastron of the same specimen.

The letters and figures indicate the same parts as in Plate 13.

Chelone subcristata

Plate 16.

Chelone breviceps, four fifths of the natural size.

Fig.

1. Upper view of the carapace.

2. Under view of the plastron and bent-down skull.

Plate 17.

Chelone breviceps.

Fig.

1. Side view of the skull, nat. size.

a. Prefrontal.
b. Maxillary.
c. Premaxillary.
f. Frontal.
g. Postfrontal.
h. Parietal.
i. Malar.
k. Squamosal.
m. Mastoid.
1. Dentary.
3. Angular.
4. Surangular.
5. Articular.

2. Upper view of one half of the skull.

a. Prefrontal.
f. Frontal.
g. Postfrontal.
h. Parietal.
m. Mastoid.

3. Under view of the skull.

c. Palatals.
d. Vomer.
e. Premaxillary.
i. Maxillary.
k. Malar.
l. Tympanic.
m. Mastoid.
o. Paroccipital.
q. Exoccipital.
r. Basioccipital.
ss. Pterygoids.
1. Dentary.
4. Surangular.
5. Articular.

4. Under view of part of another skull of the same species, without the lower jaw.

5. Back view of the skull.

g. Postfrontal.
h. Parietal.
l. Tympanic.
m. Mastoid.
o. Paroccipitals.
p. Supraoccipital.
qq. Exoccipitals.
r. Basioccipital.
t. Basisphenoid.
3. Angular.
5. Articular.

6. Side view of the carapace and plastron, with the cranium, four fifths of the nat. size.

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Chelone breviceps

Plate 17*A*.

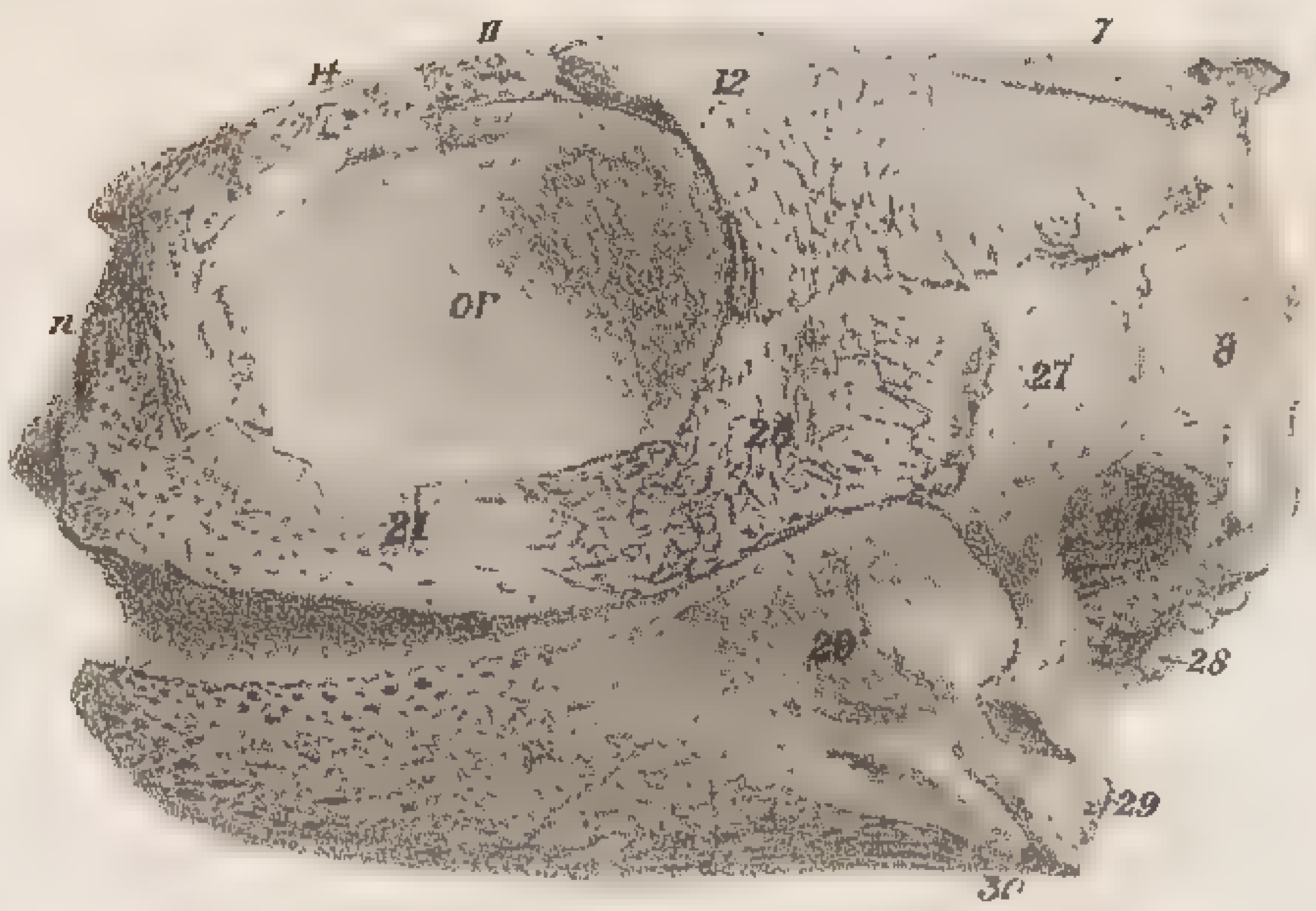
Skull of *Chelone breviceps*, nat. size.

Fig.
1. Side view.
2. Top view.
3. Base view.
4. Back view.

The following numerals indicate the same bones in each figure.

1. Basioccipital.
2. Exoccipital.
3. Supraoccipital.
4. Paroccipital.
5. Basisphenoid.
7. Parietal.
8. Mastoid.
11. Frontal.
12. Postfrontal.
14. Prefrontal (with connate Nasal and Lachrymal).
21. Maxillary.
26. Malar.
27. Squamosal.
28. Tympanic.
29. Articular.
29'. Surangular.
30. Angular.
32. Dentary.

1



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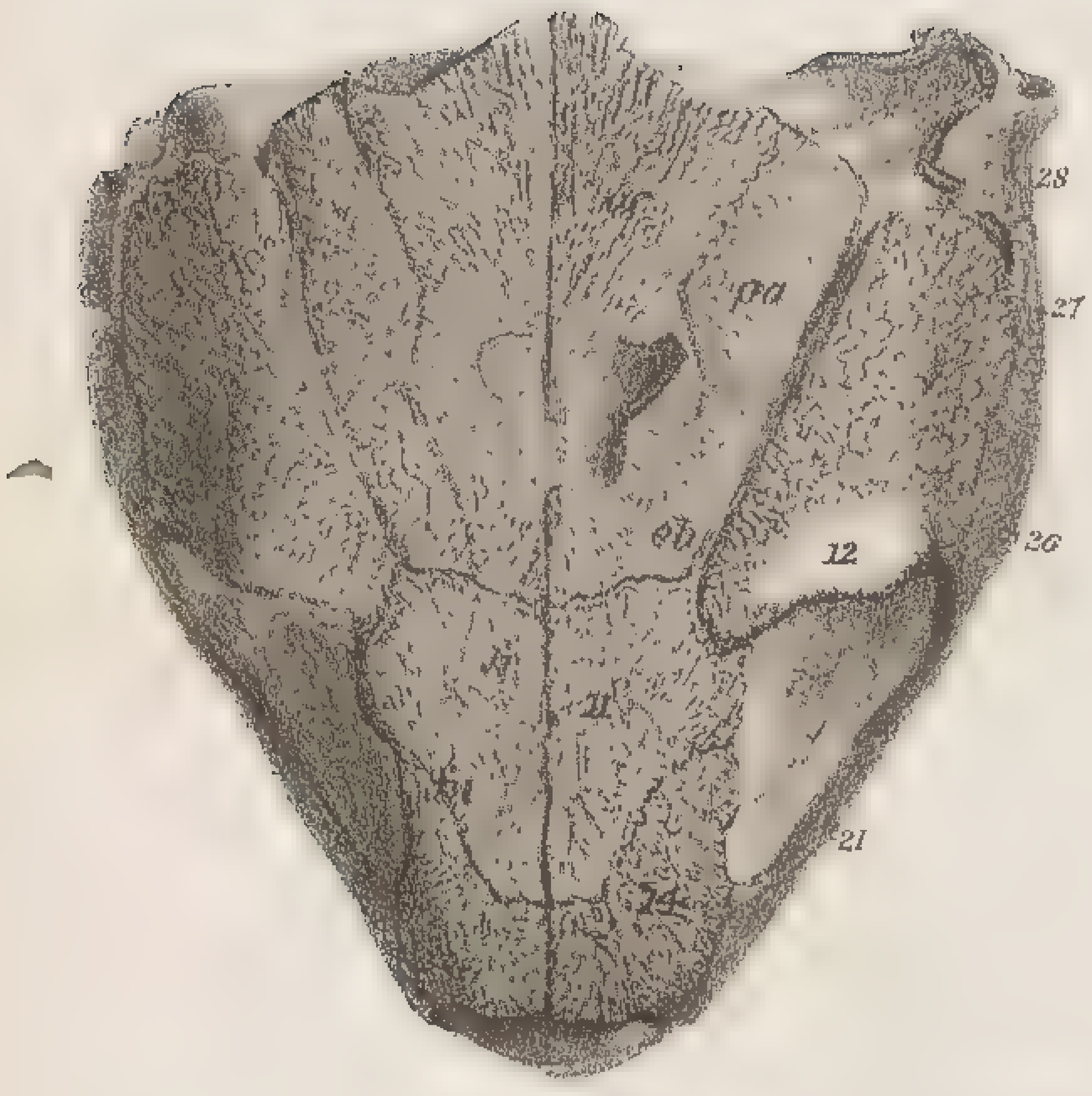

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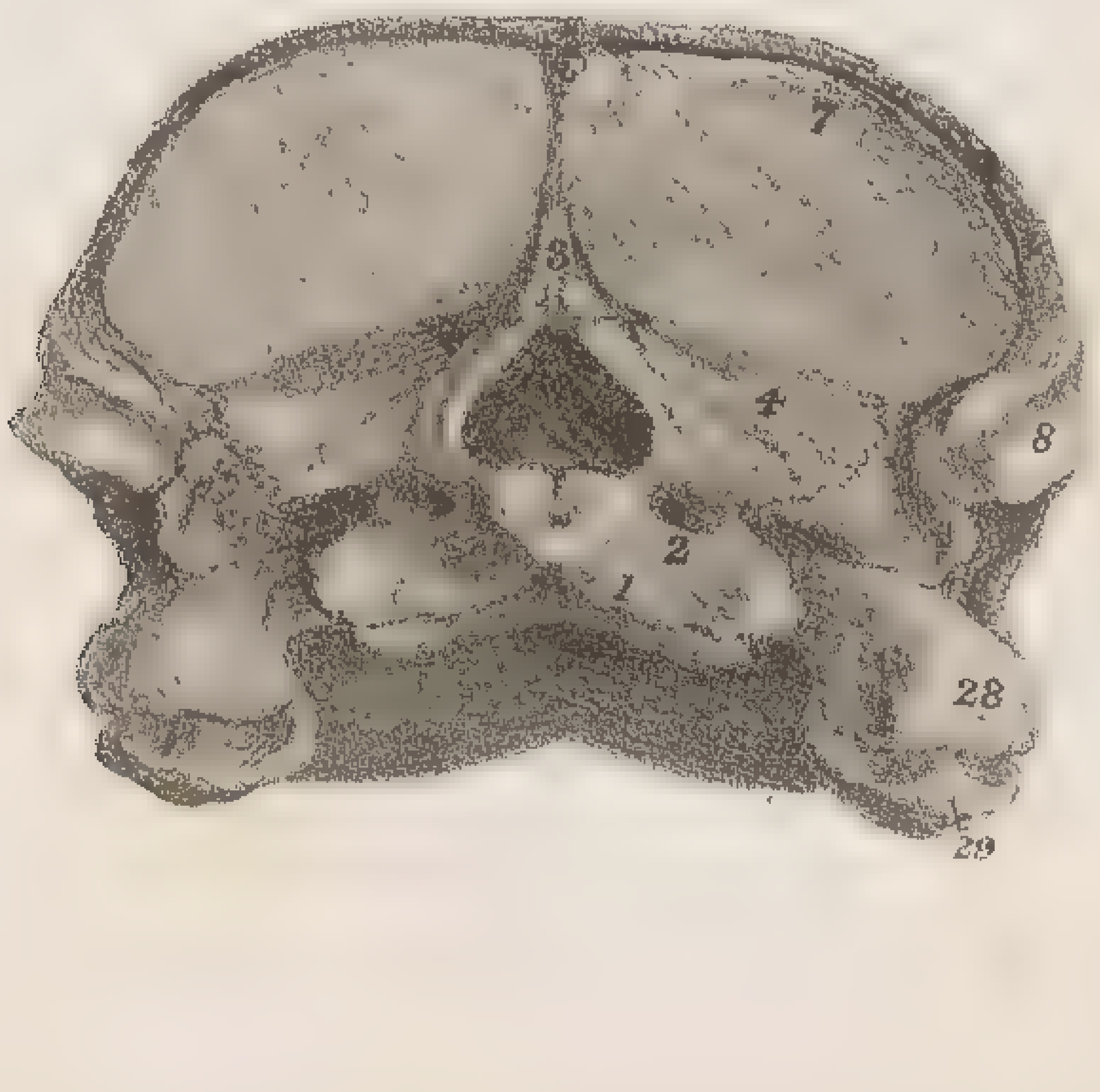
4



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Chelone breviceps.

Plate 18.

Skull of *Chelone planimentum*, nat. size.

Fig.

1. Upper view of the skull.

2. Side view of the skull.

3. Under view of the lower jaw, showing the characteristic extent and flatness of the symphysis.

Lithotint from Nature by G. S. Larf C. Hullmandel's Pat.

Chelone planimentum

Plate 19.

Chelone planimentum.

Under or inside view of the carapace, of the natural size.

Chelone planimentum.

Plate 20.

Skull of the *Chelone crassicostata*, two thirds of the nat. size.

Fig.

1. Upper view, showing chiefly a cast of the under surface of the bones.
   12. The situation of the postfrontals. 14. The prefrontals. 15. The nasals.

2. Side view.

3. Under view of the symphysis menti.

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Chelone crassicostata.

Plate 21.

Chelone crassicostata.

View of the inner surface of the carapace, half the natural size.

ch. The nuchal plate.
*pl*1. The first costal plate and adherent rib.
*pl*2. The second ditto.
*pl*3. The third ditto.
*pl*4. The fourth ditto.
*pl*5. The fifth ditto.
*pl*6. The sixth ditto.
*pl*7. The seventh ditto.
*pl*8. The eighth ditto. The figures are placed above the free projecting ends of the ribs; they belong to the second and the ninth dorsal vertebræ inclusive.
*s*9. The ninth neural plate.
*s*10. The tenth neural plate.
py. The last neural or the "pygal" plate.

These are developed, like the nuchal plate, in the substance of the derm, and do not become confluent with any parts of the endoskeleton.

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Chelone crassicostata.

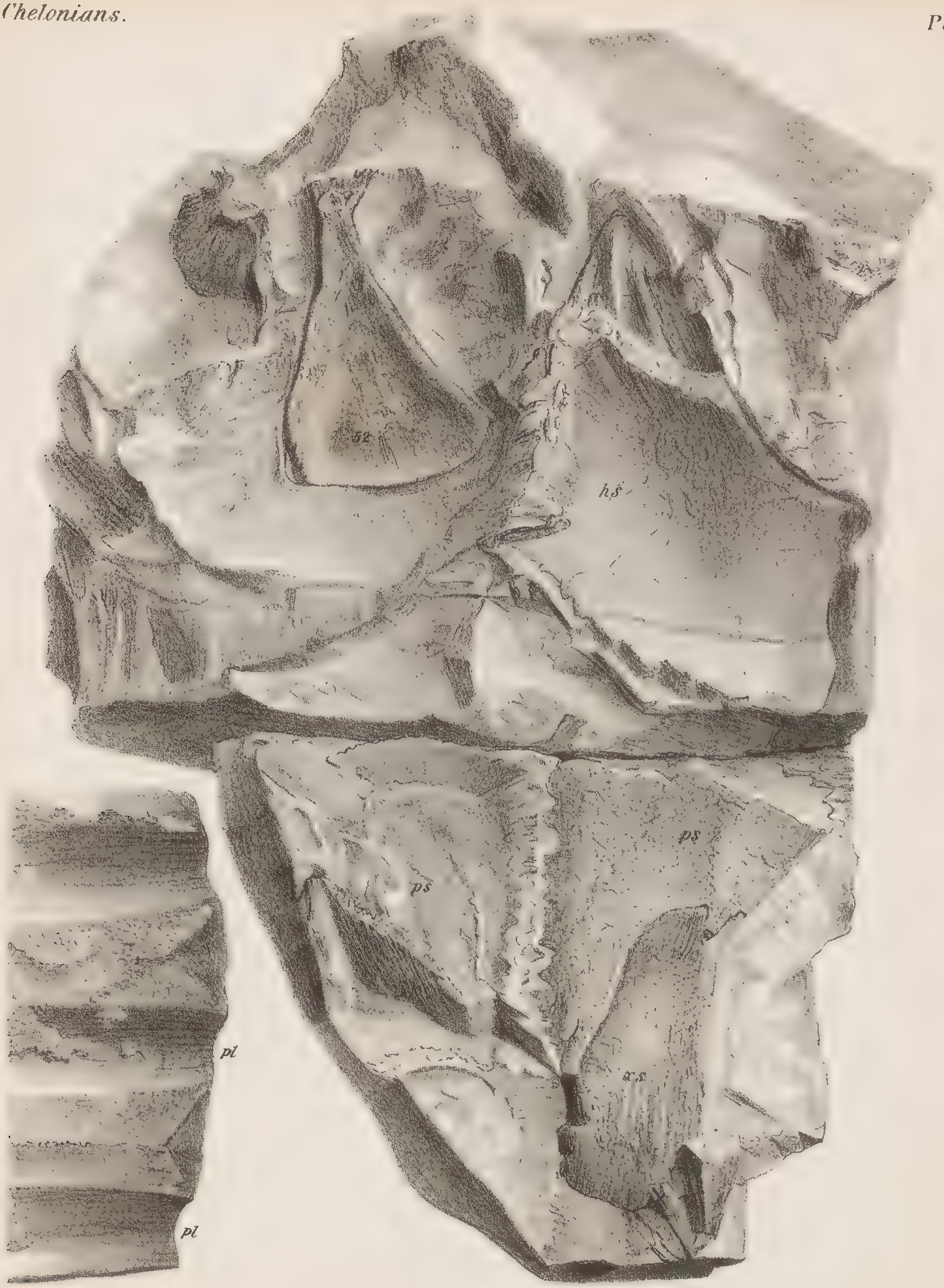
Plate 22.

Chelone crassicostata.

Fig.

1. Portion of the plastron seen from the under side.
   hs. The hyosternal; *ps,* the hyposternal; *xs,* the xiphisternal. 52 is the coracoid, exposed by the removal of the right hyosternal.

2. Cast in the matrix of a portion of the carapace of the same individual, showing the characteristic thickness of the ribs, *pl, pl.*



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Chelone crassicostata.

Plate 22*A*.

Chelone crassicostata.

Portion of the carapace, half the nat. size, with the corresponding series of marginal plates, *m*6—*m*12, and *py*.

*pl*3 and *pl*4, the third and fourth costal plates of the left side; *pl*5—*pl*8, impressions in the matrix of the succeeding costal plates.

Chelone crassicostata.

Plate 22*B*.

Chelonę crassicostata, half the nat. size.

Fig.

1. Outside view of the carapace. *s*7—*s*10, the seventh to the tenth neural plates inclusive: *pl*2—*pl*8, the second to the eighth costal plates of the left side; *pl*3—*pl*8, the third to the eighth, inclusive of the right side.

2. The plastron dislocated and crushed in, with part of the skull showing the orbit *o*; *hs*, the hyosternal; *ps*, the hyposternal; *xs*, the xiphisternal; 51, the scapula; 52, the coracoid.

Chelone crassicostata.

Plate 23.

Chelone declivis.

Fig.

1. Upper view of the left moiety of the carapace, nat. size.

ch. Impression of the nuchal plate.

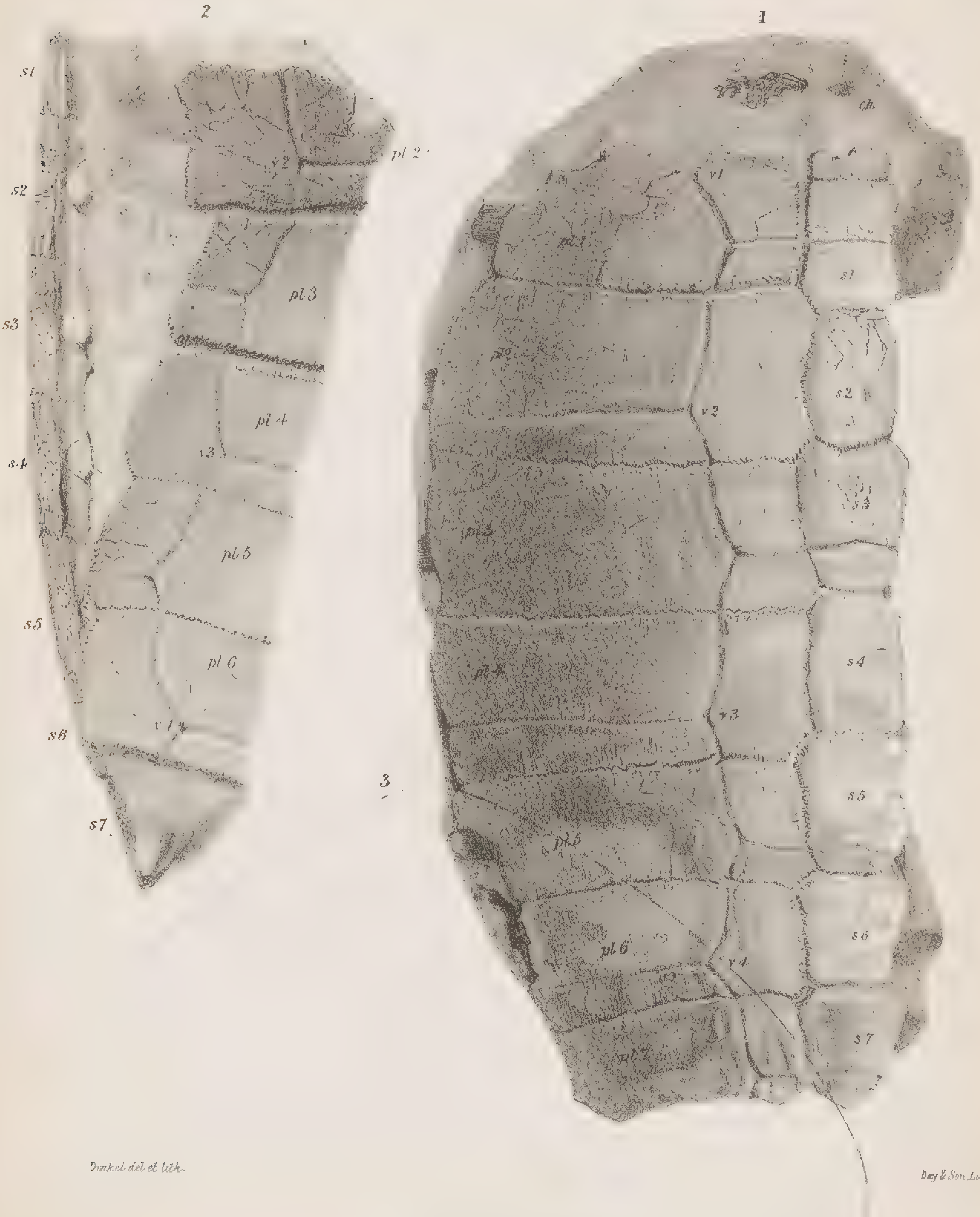
s1. First neural plate.
s2. Second ditto.
s3. Third ditto.
s4. Fourth ditto.
s5. Fifth ditto.
s6. Sixth ditto.
s7. Seventh ditto.

pl1. First costal plate.
pl2. Second ditto.
pl3. Third ditto.
pl4. Fourth ditto.
pl5. Fifth ditto.
pl6. Sixth ditto.
pl7. Seventh ditto.

v1. Impression of the first vertebral scute.
v2. Impression of the second vertebral scute.
v3. Impression of the third vertebral scute.
v4. Impression of the fourth vertebral scute.

2. View of part of the dislocated right half of the carapace. The same letters and numerals signify the same parts.

5. Outline of the natural transverse curve of the carapace.



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Chelone declivis.

Plate 24.

Chelone latiscutata, nat. size.

Fig.

1. Upper surface of the carapace.

*s*1. First neural plate. — *pl*1. First costal plate.
*s*2. Second do. — *pl*2. Second do.
*s*3. Third do. — *pl*3. Third do.
*s*4. Fourth do. — *pl*4. Fourth do.
*s*5. Fifth do. — *pl*5. Fifth do.
*s*6. Sixth do. — *pl*6. Sixth do.
*v*2. The impression of the second vertebral scute.
*v*3. The impression of the third vertebral scute.

2. Lower surface of the plastron.

s. Extremity of the entosternal.
hs. The hyosternal.
ps. The hyposternal.
xs. Impressions of the xiphisternals.

3. Anterior surface of the carapace and plastron, showing the degree of convexity of those parts, and the depth of the osseous case.

51 is the scapular arch.

4. Upper view of the skull of *Chelone convexa*, nat. size. The letters and figures indicate the same parts as in Plate 17*A*.

Chelone latiscutata.

Plate 25.

Fig.

1. Skull of *Chelone convexa*, side view.
2. Ditto base view.
3. Ditto top view.
4. Base view of part of skull of *Chelone trigoniceps*.
5. Under view of symphysis of lower jaw of ditto.
6. Upper view of the same specimen.
7. Back view of ditto.

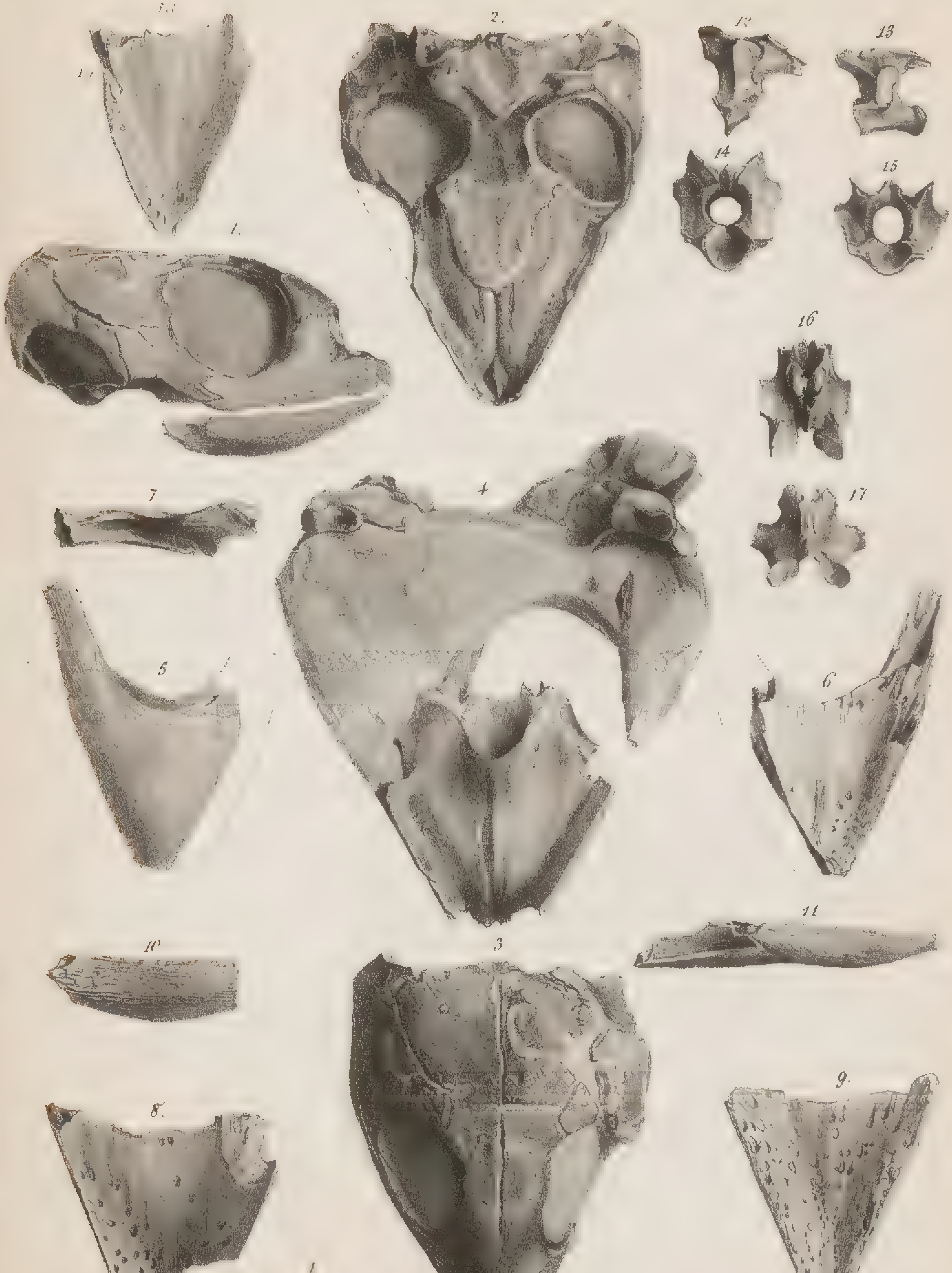
11. Side view of ditto.

8. Part of symphysis of the lower jaw of the *Chelone acuticeps*.

10. Side view of ditto.

9. Upper view of the symphysis of the lower jaw of the *Chelone longiceps*.

12. Side view of a sacral vertebra of a fossil *Trionyx*.
13. Side view of a corresponding vertebra of a recent *Trionyx*.
14. Front view of the same fossil vertebra.
15. Front view of the same recent vertebra.
16. Top view of the same fossil vertebra.
17. Top view of the same recent vertebra.
18. Flattened symphysis of the lower jaw of the *Chelone acuticeps*.



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Eocene Chelonia of Bracklesham.

Plate 26.

Trionyx incrassatus.

Fig.

1. Inside view of the carapace, wanting the nuchal plate, half nat. size.

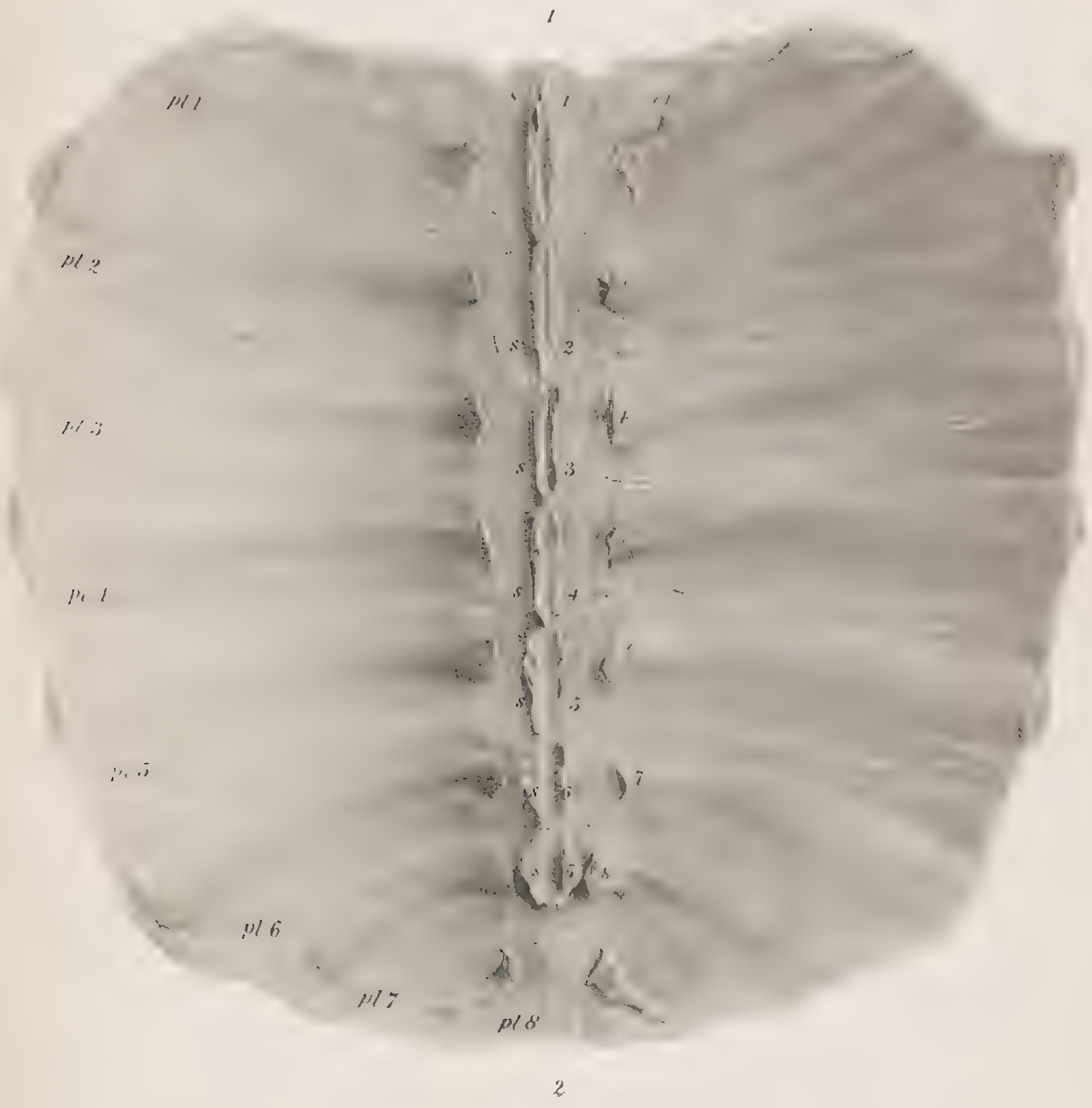
   *s*1—*s*7. The first to the seventh neural plates, with the connate neural spines and arches.

   *pl*1—*pl*8. The eight costal plates of the right side.

   *c*1. The place of attachment of the outer end of the first dorsal rib.

   *c*2—9. The portions of the consecutive dorsal ribs that become connate with the costal plates.

2. Transverse contour of the upper surface of the carapace.



Trionyx incrassatus.

Plate 27.

Trionyx incrassatus.

Fig.

1. Upper or outside view of the fore part of the carapace, with the nuchal plate, half nat. size.

   ch. The nuchal plate.

   *s*1. The first neural plate.

   *s*2. The second neural plate.

   *pl*1—*pl*3. The three anterior costal plates of the left side.

2. Under or inside view of the same specimen.

   ch. The nuchal plate.

   *s*1. The first neural plate connate with the neural spine of the second dorsal vertebra, of which part of the under surface of the centrum is here preserved and shown.

   *s*2. The second neural plate, with the connate neural arch of the third dorsal vertebra.

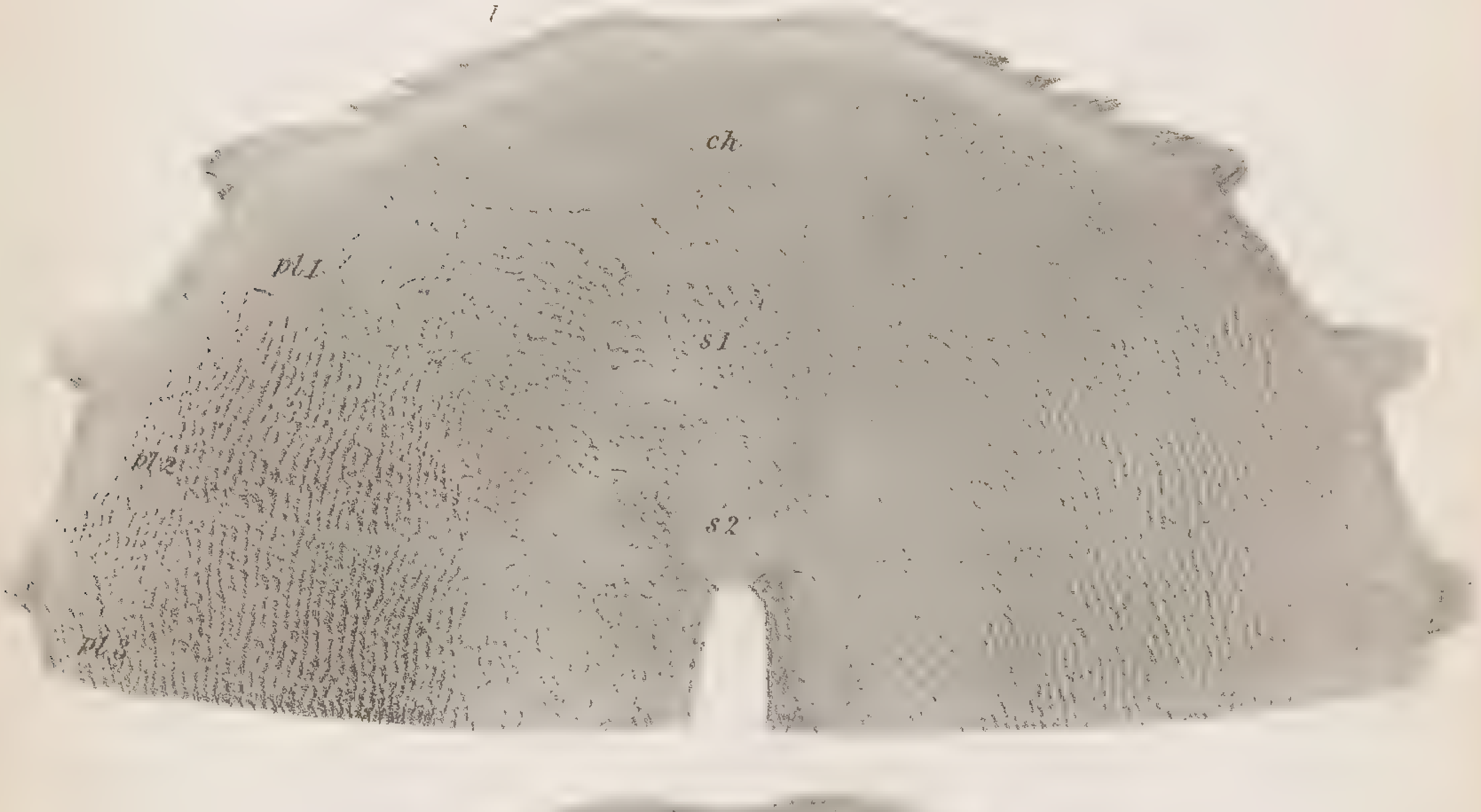
   *pl*1—*pl*3. The three anterior costal plates of the right side.

   *c*1. The place of attachment of the outer end of the first dorsal rib.

   *c*2. The portion of the second dorsal rib that becomes connate with the first costal plate. *c*2′. The extremity of the rib that again becomes free.

   *c*3. The third rib attached to the second costal plate.

   *c*4. The fourth rib attached to the third costal plate.



½ Nat. size

Trionyx incrassatus.

Plate 28.

Trionyx incrassatus.

The parts are figured half the nat. size.

Fig.

1. Entosternal.
2. Episternal, under side.

2′. Ditto, upper side.

3. Part of right hyosternal, and the hyposternal, under or outer side.

3′. *hs*, Ditto, and *ps*, ditto, upper side.

4. Two views of the scapula (51), and connate acromial clavicle (58) ; 4″ shows the osseous structure of the end of the scapula, nat. size.
5. The coracoid.

6, 6′. Two views of the ilium.

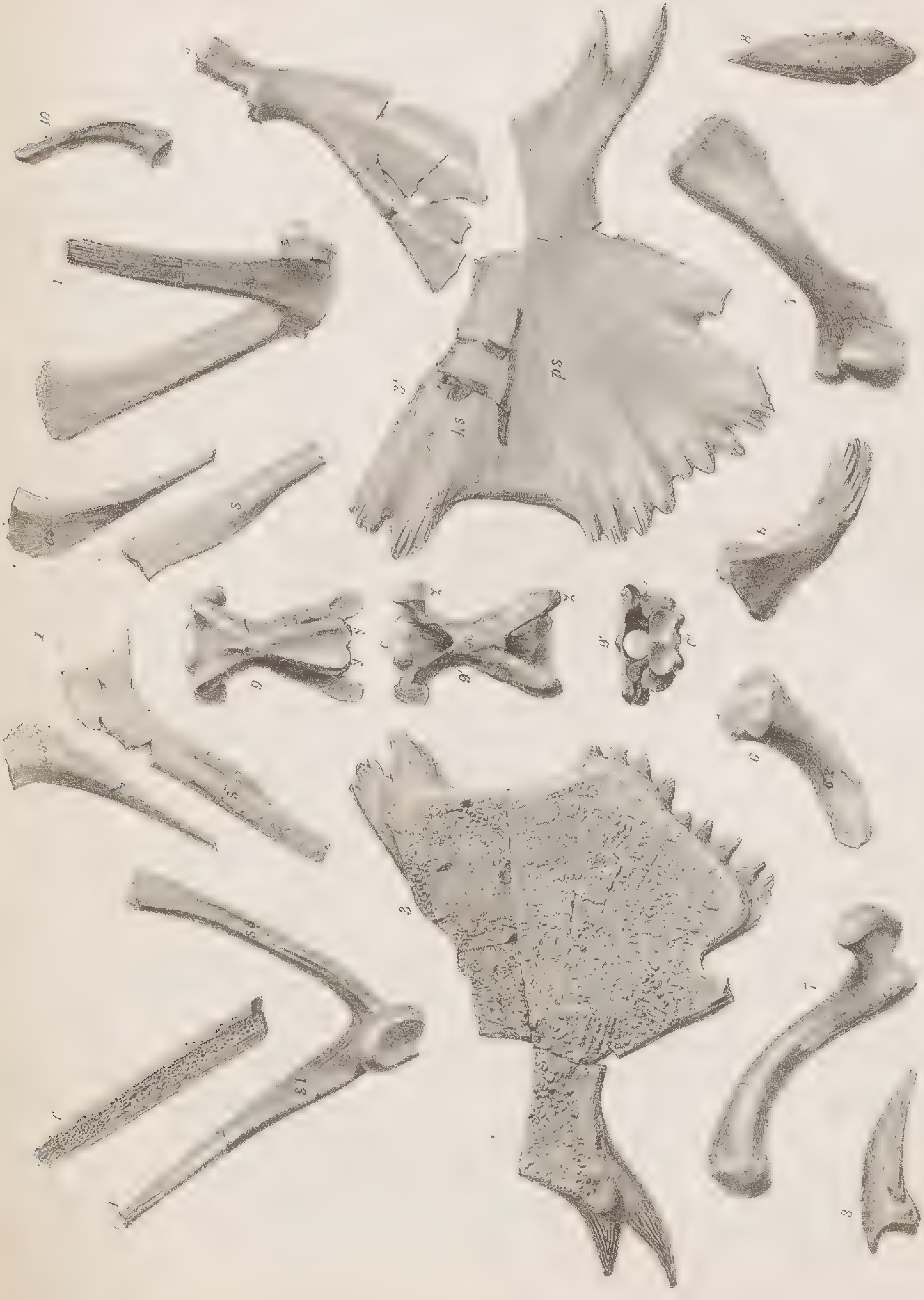
7, 7′. Two views of the femur.

8, 8. Two views of an ungual phalanx, nat. size.

9. Under view of the sixth cervical vertebra ; *y*, *y*, the hypapophyses.

9′. Upper view of the same vertebra ; *c*, the anterior convex articular surface of the centrum ; *n*, the neural arch ; *z*, *z*, the zygapophyses (oblique or articular processes).

9″. Back view of the same vertebra, showing the double concavity of the articular surface.



Trionyx incrassatus.

½ Nat. size.

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PLATE 29.

Trionyx rivosus.

Fig.

1. Outside view of hinder half of the carapace, nat. size.
   *pl*4—*pl*8. The fourth to the eighth costal plates inclusive.

2. Inside view of the same specimen.
   *pl*4—*pl*8. The fourth to the eighth costal plates inclusive.
   5—9. The ribs (fifth to the ninth dorsal inclusive) connate with the above costal plates.
   *s*6. The neural arch confluent with the sixth neural plate.

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Trionyx rivosa

Plate 30.

Trionyx marginatus.

Fig.

1. Upper view of the carapace, wanting the nuchal plate, half the nat. size. The letters and figures indicate the same parts as in Plate 5.

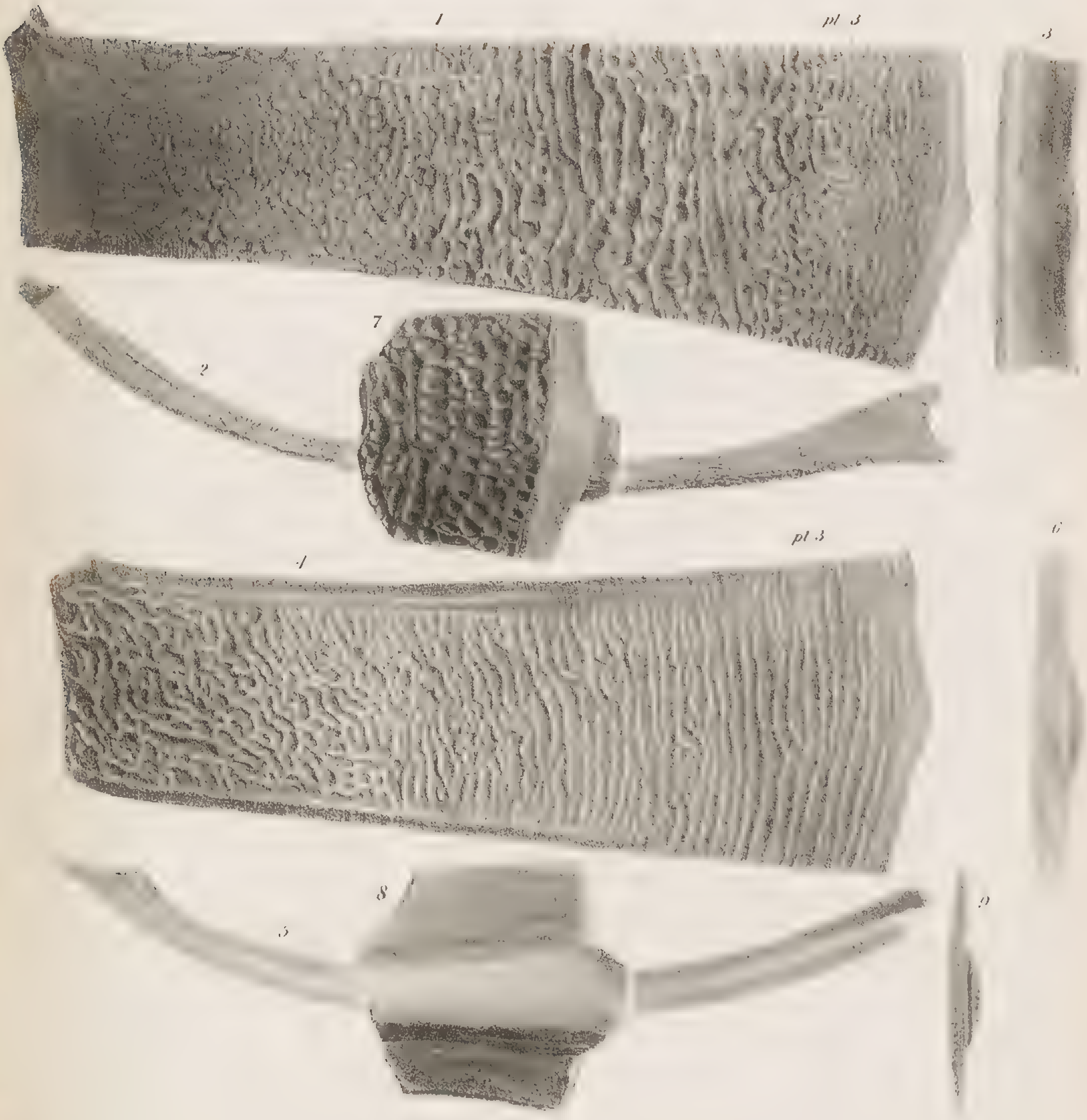
2. Outline of the transverse curvatures of the upper surface of the carapace.

Trionyx marginatus.

Plate 31.

Fig.

1. Upper surface of the third costal plate, right side, of the *Trionyx circumsulcatus*, nat. size.
2. Articular margin of ditto; showing the natural curve and thickness of the plate.
3. Peripheral margin of ditto; showing the groove.
4. Upper surface of the third costal plate, right side, of the *Trionyx marginatus*.
5. Sutural margin of ditto.
6. Peripheral margin of ditto.
7. Upper surface of a fragment of a costal plate of the *Trionyx pustulatus*, nat. size.
8. Under surface of ditto, showing the large and prominent adherent rib.
9. Peripheral margin of ditto.



Figs. 1_3. Trionyx circumsulcatus.

Plate 32.

Trionyx planus.

Fig.

1. Upper view of the hind part of the carapace, half the nat. size.

2. Inside view of the same specimen; *pl*5—*pl*8, the fifth to the eighth costal plates inclusive.

3. Peripheral border of the fifth costal plate, nat. size.

4. Peripheral border of the fifth costal plate of the *Trionyx Barbaræ*, showing the difference in their relative thickness.

Trionyx planus.

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PLATE 33.

Fig.

1. Under view of the lower jaw of a turtle (*Chelone*), nat. size. (Hordwell Cliff).
2. Upper view of the same specimen.
3. Upper view of the fourth cervical vertebra of a *Trionyx*; *d*, diapophysis. Nat. size.
4. Side view of the same specimen (Hordwell Cliff).
5. The left os pubis of a *Trionyx*, nat. size (Hordwell Cliff).
6. Part of the plastron of *Trionyx planus*, half the nat. size; *hs*, hyosternal; *ps*, hyposternal.
7. Right hyposternal of a *Trionyx*, from Bracklesham, half the nat. size. (In the Collection of Frederick Dixon, Esq., F.G.S.)

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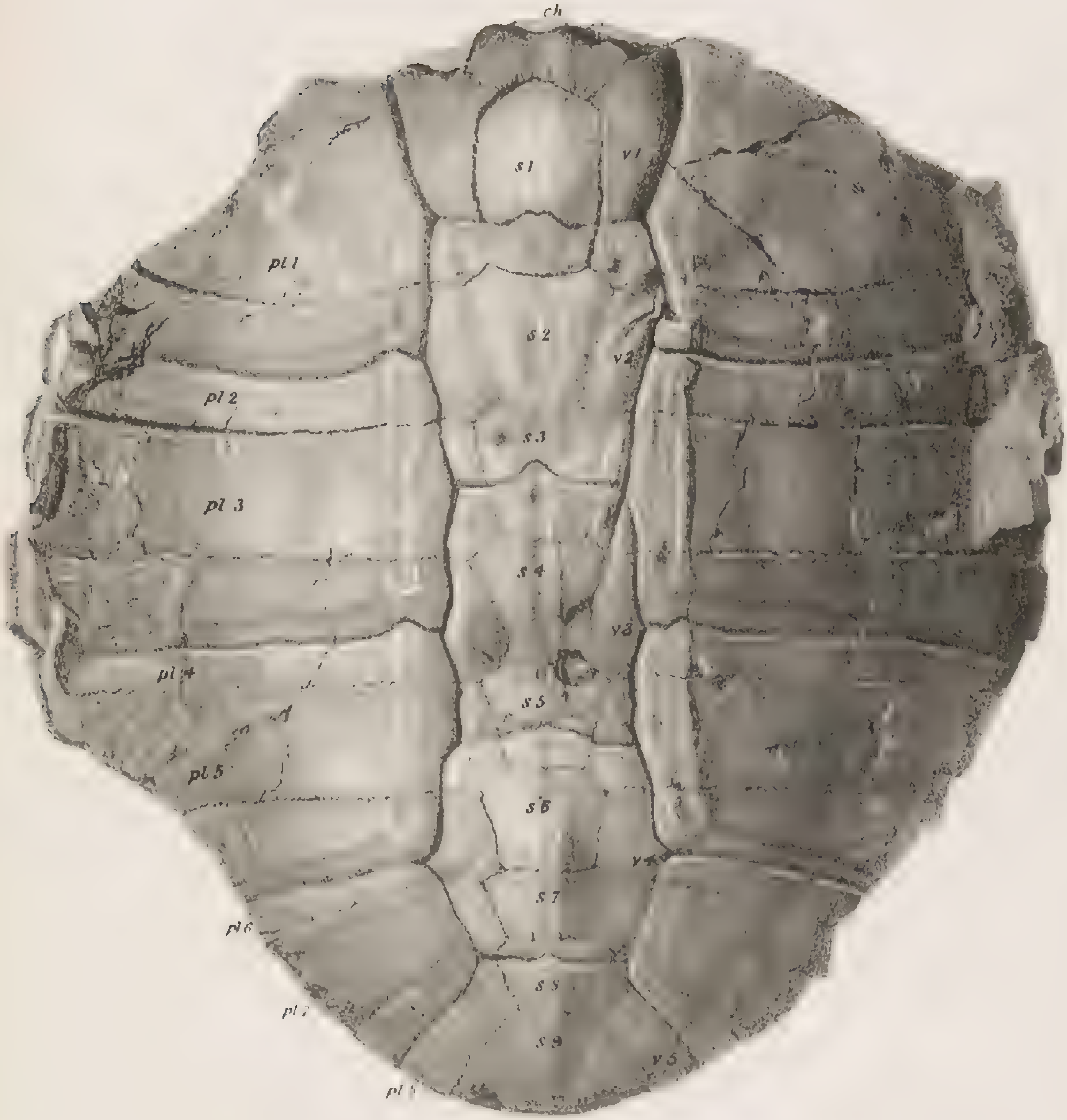
Plate 34.

Emys bicarinata, two fifths the nat. size.

The letters and numbers on the carapace, the upper surface of which is figured, indicate the same parts as in the previous figures.

The transverse contour of the carapace is given in outline above.



½ Nat. Size

Emys tricarinata.

PLATE 35.

Emys bicarinata, two fifths the nat. size.

The plastron; *s,* the entosternal piece.
xs, the xiphisternals.

⅔ Nat Size

Emys tricarinata.

Plate 36.

Emys testudiniformis, nat. size.

Fig.

1. Nuchal plate.

2. Upper surface of the third neural plate.

3. Under surface of ditto.

4. Upper surface of the fifth neural plate.

5. A posterior marginal plate.

6. Front view of a mutilated cuirass in which the carapace has been slightly depressed; the natural curve, across the middle, is indicated by the outline.

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Emys testudiniformis.

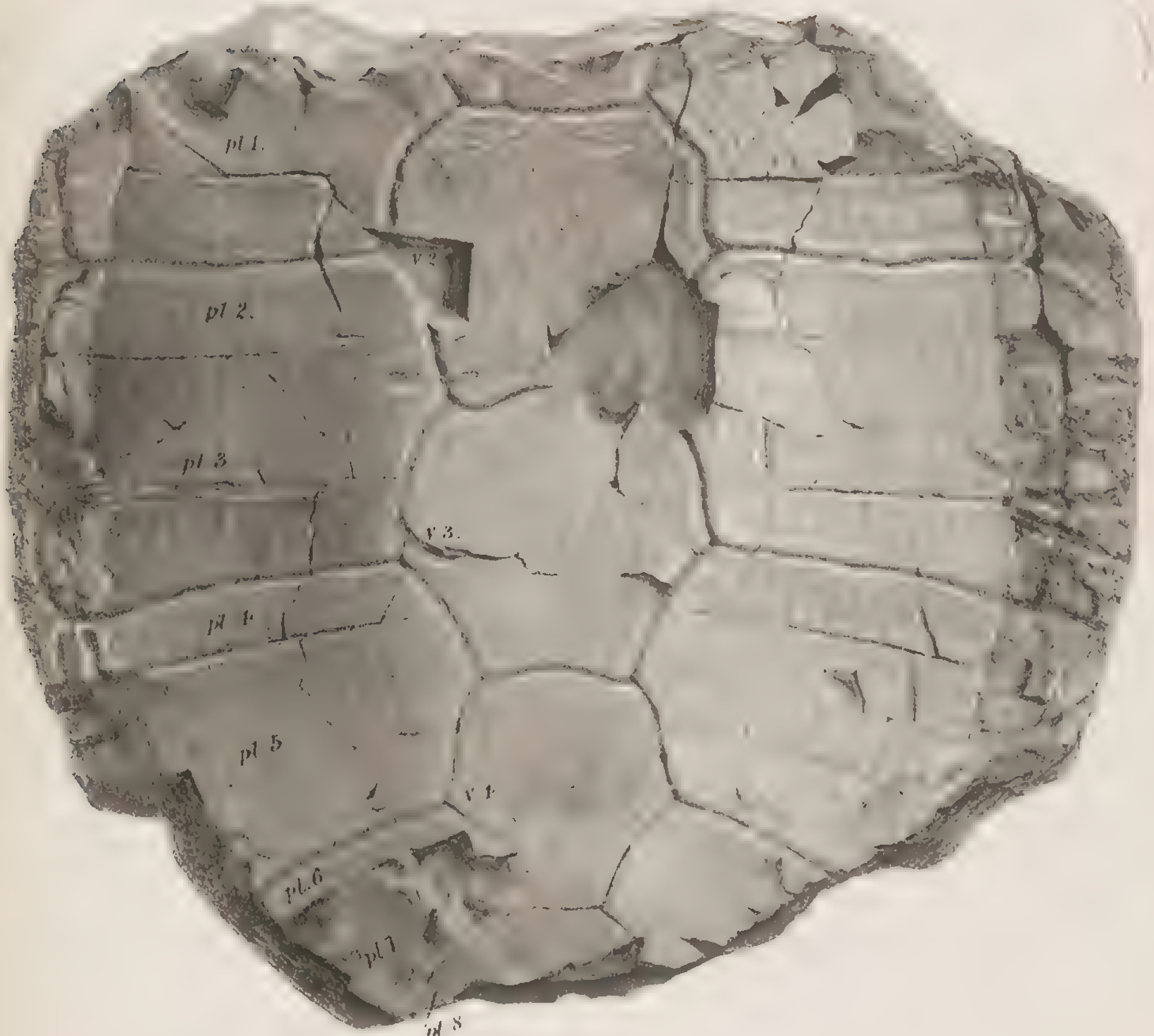
Plate 37.

Emys Delabechii, two fifths the nat. size.

Upper or outside view of the carapace; the transverse curve is given in the outline above.

*pl*1—*vl*8. The eight costal plates of the left side.

*v*2—*v*4. The second to the fourth vertebral scutes inclusive.



2/5 Nat. Size.

Emys Delabechii.

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Plate 38.

Emys crassus, two thirds the nat. size.

Fig.

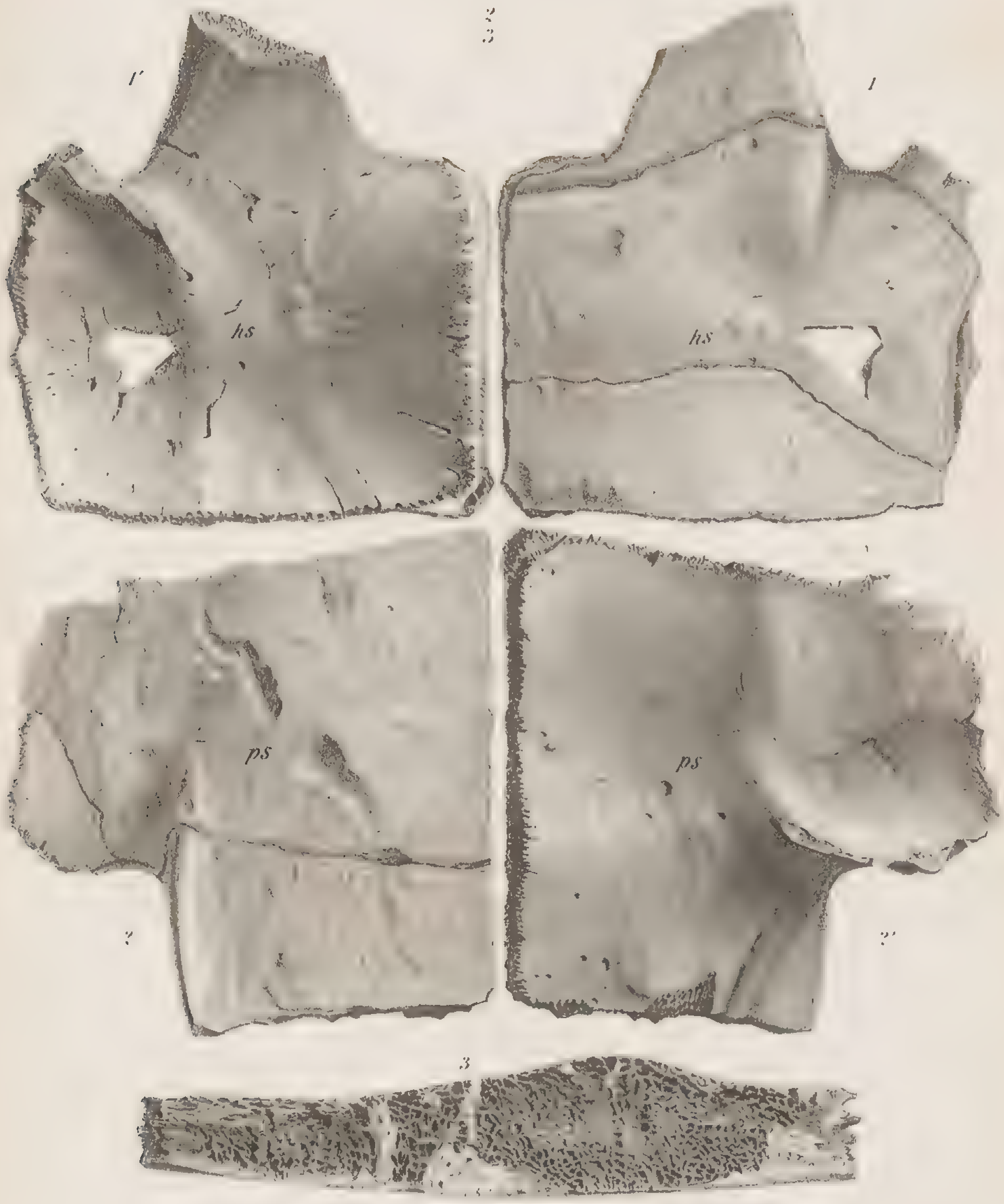
1. Outside view of the left hyposternal.

1′. Inside view of ditto.

2. Outside view of right hyosternal.

2′. Inside view of ditto.

3. Sutural border of hyosternal, nat. size.



Nat. Size.

Emys crassus.

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Plate 39.

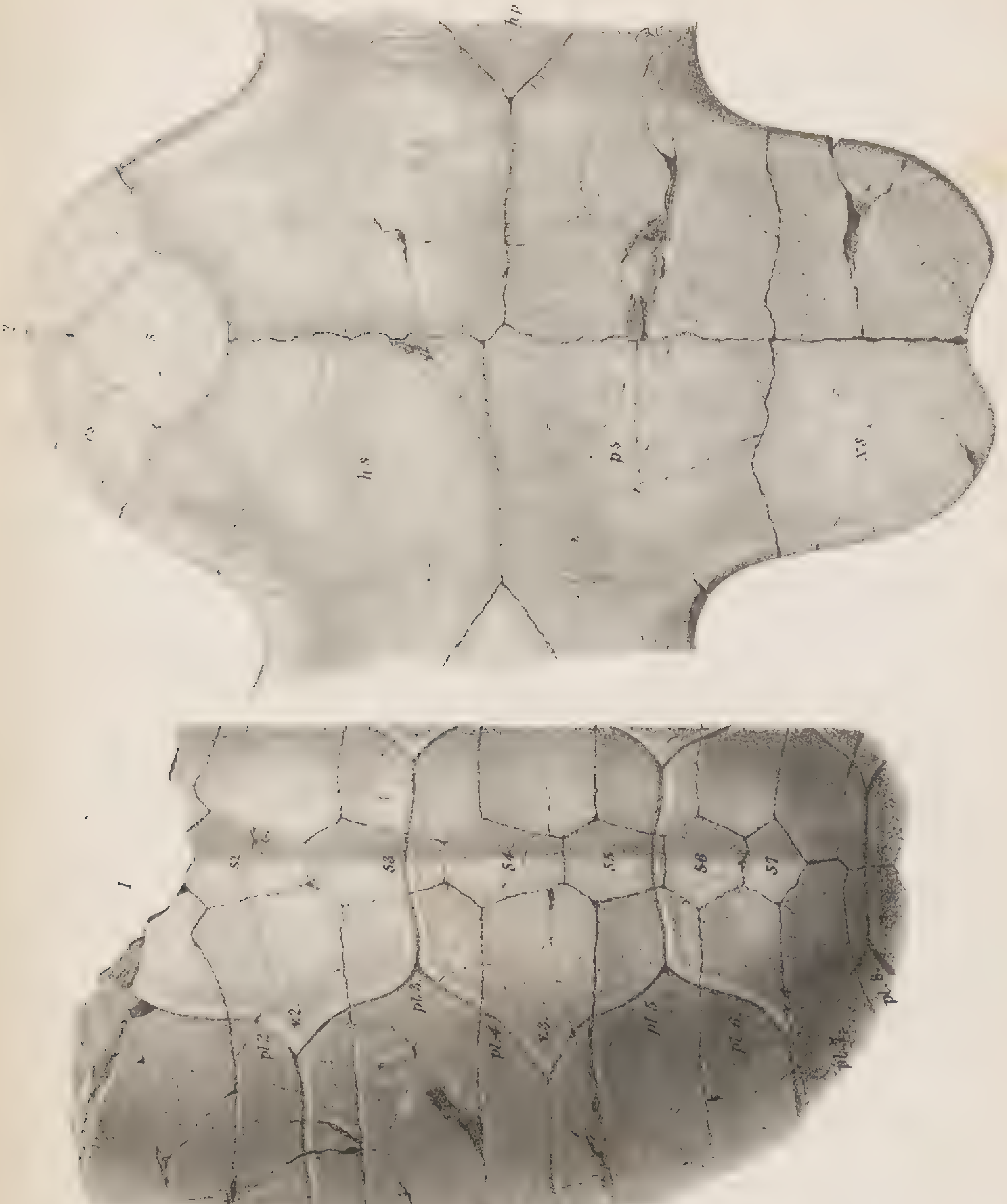
Platemys Bowerbankii, half the nat. size.

Fig.

1. The mutilated carapace.

2. The plastron.

The letters and figures indicate the same parts as in Plate 4.



Platemys Bowerbankii.

Plate 40.

Chelonia.

Fig.

1. Side view of the fore part of the skull of the *Platemys Bowerbankii*, nat. size.
2. Upper view of the same fossil.
3. Side view of a fractured tympanic bone of a large Turtle (*Chelone*), from Bracklesham, showing the long and slender ossicle or 'columella' (16) *in situ;* nat. size.
4. Extremity of the same tympanic bone, to which the 'membrana tympani' was attached.
5. Proximal end of the femur of a very large Chelonian from the Isle of Sheppy, nat. size.

5′. Left femur of a Turtle (*Chelone mydas*) which weighed 150 lbs., nat size.

J Erxleben

1 & 2, Platemys Bowerbankii.

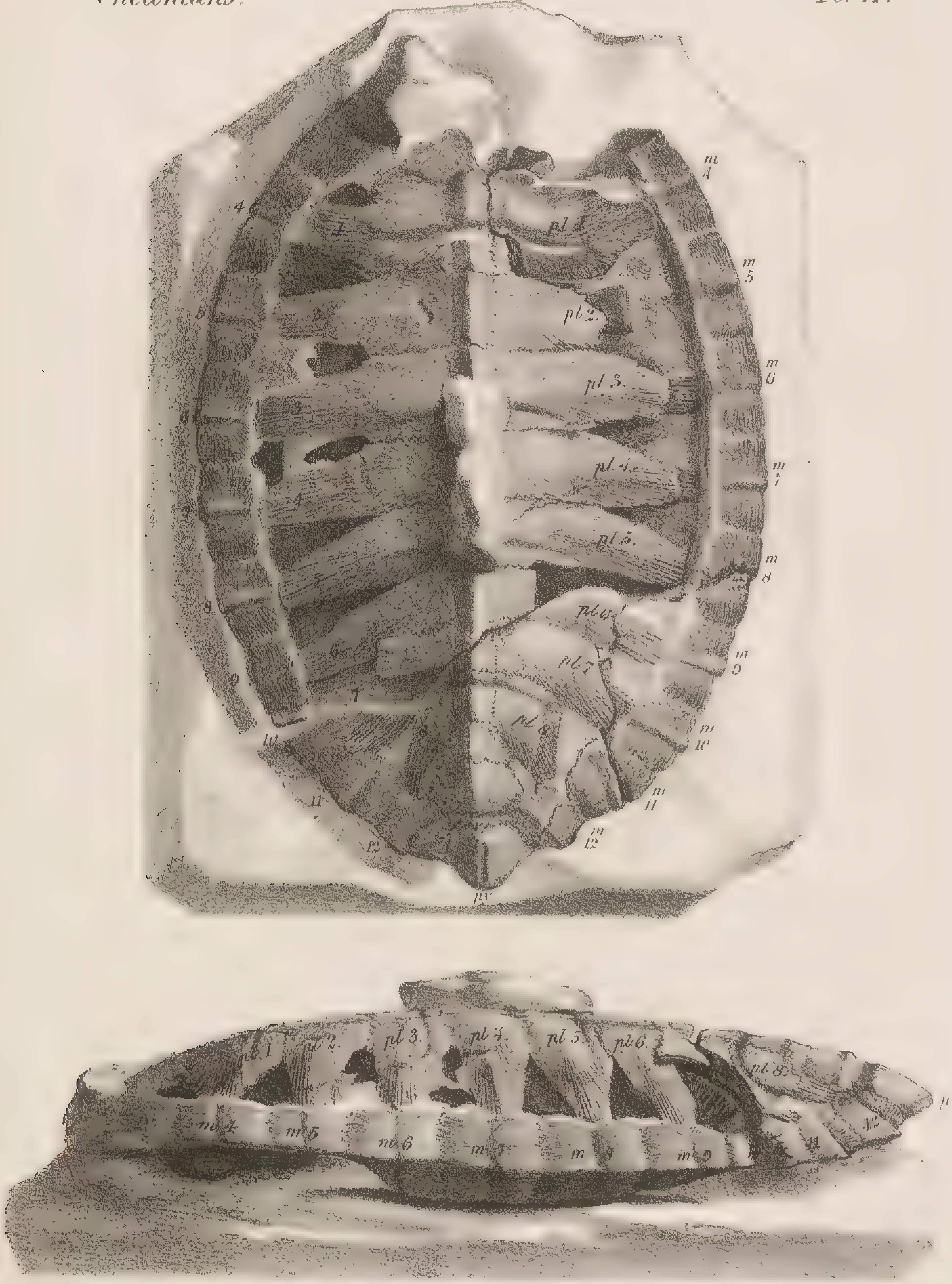
PLATE 41.

Chelone Benstedi, nat. size.

Fig.
1. Upper view of the carapace.
2. Side view of the carapace.

The letters and figures are explained in the text.

From the Middle Chalk, Kent. In the Museum of Dr. Mantell, F.R.S.



Chelone Benstedi.

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PLATE 42.

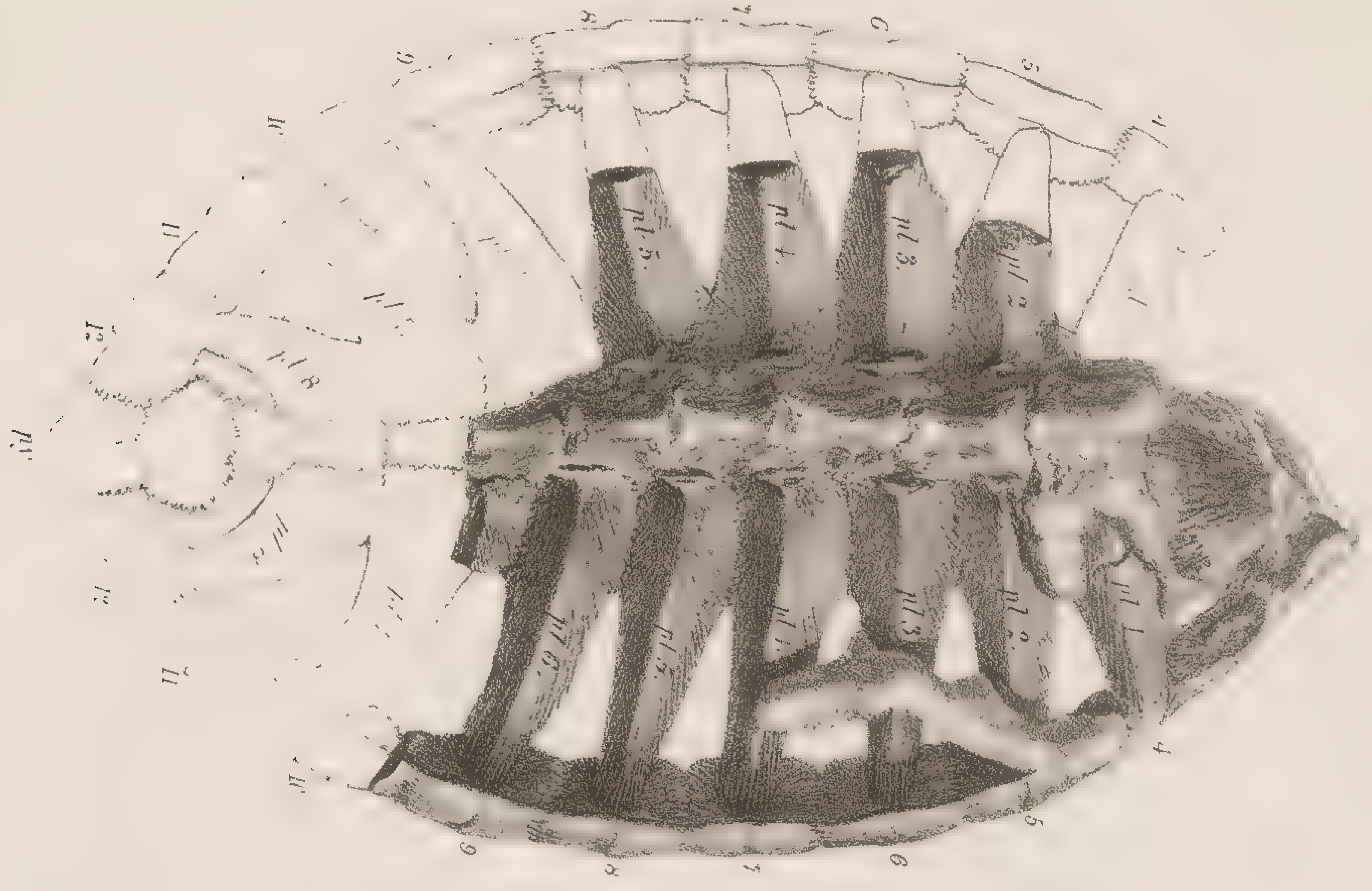
Chelone Benstedi, nat. size.

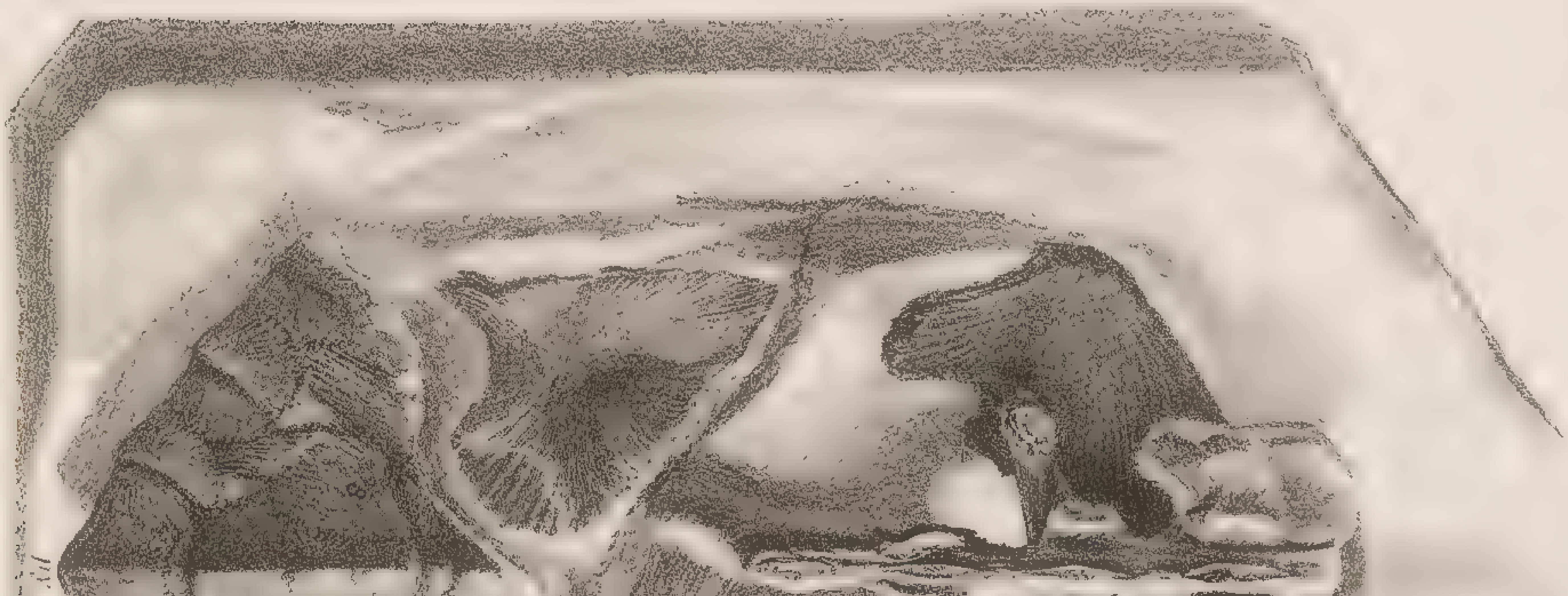
Fig.

1. Under view of the carapace.

2. Upper view, with the part of the carapace removed to show the bones of the plastron and coracoid.

From the Middle Chalk, Kent. In the Museum of Dr. Mantell, F.R.S.





Chelone Benstedi.

PLATE 43.

Chelone Benstedi, nat. size.

Fig.

1. Upper view of the carapace.
2. Side view of the carapace.
3. Oblique view of fore-part and left side of the carapace.
4. Outline of transverse section of the carapace.

From the Middle Chalk, Kent. In the Museum of J. S. Bowerbank, Esq., F.R.S.

Chelone Bensledi.

Jos. Dinkel, del et lith

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PLATE 44.

Chelonian Fossils, nat. size.

Fig.

1. Part of the plastron of a Turtle: the episternum, *es*, resting upon the left hyosternal.
2. Part of a rib of a carapace.
3. Part of a larger rib of a carapace.
4. Part of a rib of a carapace.
5. The hyosternal element of the plastron of a *Chelone Benstedi*.
6. Portion of the scapula and clavicle of a Turtle.
7. One of the marginal plates of a carapace.
8. A humerus of a Turtle.
9. An ulna of a Turtle.

From the Chalk of Kent. In the Museum of Thomas Charles, Esq., of Maidstone.

From Nature on Stone by J. [illegible] *Day & Son, lith^rs to the Qu[illegible]*

PLATE 45.

Chelone Camperi, nat. size.

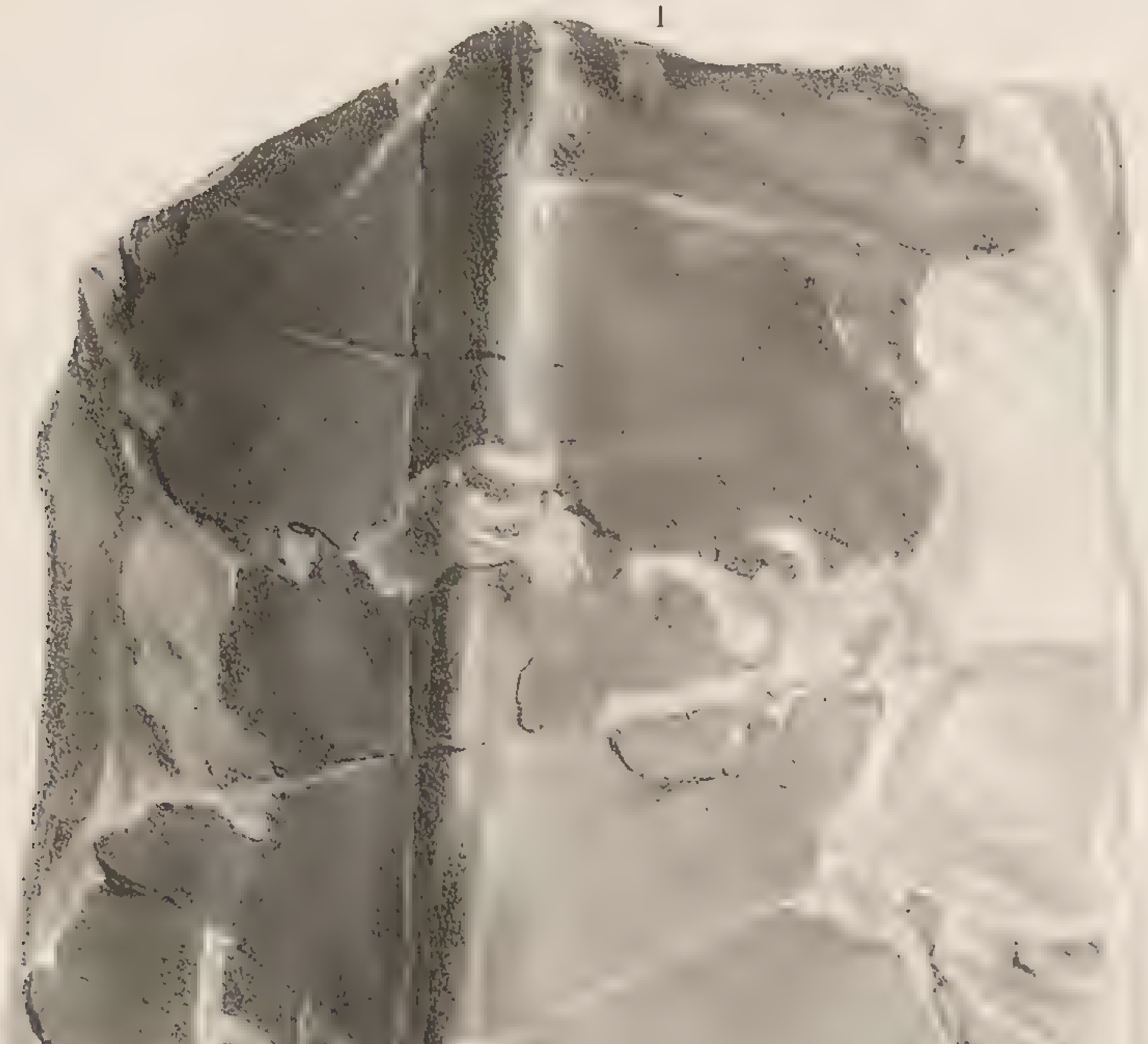
Fig.

1. External surface of two dermal plates, probably 'marginal' ones.

2. Transverse section of one of the above, and of a subjacent inverted plate.

From the Upper Chalk of Kent. In the Museum of Thomas Charles, Esq., of Maidstone.

1



2

Chelone Camperi.

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PLATE 46.

Chelone Camperi (?), nat. size.

Fig.

1. Outer surface of a series of five 'marginal' plates.

2. Inside view of the same.

3. Portions of two ribs of the carapace of apparently the same species of Turtle.

From the Middle Chalk of Kent. In the Museum of Mrs. Smith, of Tonbridge Wells.

4. Last cervical vertebra of a recent Turtle (*Chelone mydas*).

c. Centrum.
y. Hypapophysis.
z. Anterior zygapophysis.
z'. Posterior zygapophysis.
n. Neural arch, which is produced far beyond the centrum.

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PLATE 47.

Protemys serrata, half nat. size.

Upper surface of the carapace.

The letters and figures signify the same parts as in the preceding plates, and are explained in the text.

From the "Kentish Rag," Green-sand Formation, Maidstone. In the Collection of Capt. Guise, F.G.S.

J. Dinkel del et lith.

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Platemys serrata

PLATE 48.

Fig.

1. Upper view of the skull of *Chelone pulchriceps*, nat. size.
2. Side view of ditto ditto.
3. Under view of ditto ditto.

   7. Parietal.
   8. Mastoid.
   11. Frontal.
   12. Post-frontal.
   14. Pre-frontal.
   15. Nasal.
   20. Palatine.
   21. Maxillary.
   22. Premaxillary.
   24. Pterygoid.

   From the Green-sand, Barnwell, Cambridgeshire. In the Collection of the Rev. Thomas Image, M.A., of Whepstead.

4. Upper view of the mandible of a *Chelonian*.
5. Side view of the same mandible, nat. size.
6. Under view of the mandible of another species of Chelonian.
7. Side view of the same mandible, nat. size.
8. A marginal plate of the carapace of a Turtle (*Chelone*).

   The above three specimens are from the Chalk of Kent: and are in the collection of James Scott Bowerbank, Esq., F.R.S.

9. The scapula 51, and coracoid 52, of a Turtle (*Chelone*).

   From the Chalk of Sussex. In the Collection of Henry Catt, Esq., of Brighton.

10. Part of the coracoid of a Turtle (*Chelone*).

    From the Burham Chalk-pit, Kent. In the Collection of Mrs. Smith, of Tonbridge Wells.

11. The upper or inner surface of the left hyosternal bone of *Protemys serrata*, nat. size. From the same specimen as the subject of T. VII.
12. The left hyosternal bone of an immature *Emys*, similarly mutilated of its inner process.

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Lacertians.

PLATE 1.

Mosasaurus gracilis, nat. size.

Fig.

1. Side view of a hinder dorsal vertebra.
2. Back view of ditto.
3. Two caudal vertebræ.

From the Upper Chalk, near Lewes. In the Mantellian Collection, British Museum.

Mosasaurus Hoffmanni.

4. Side view of a hinder dorsal vertebra, nat. size.
5. Back view of ditto.

From the Cretaceous Beds, at Maestricht. In the British Museum.

6. The half of a vertically and longitudinally bisected vertebral centrum of a *Mosasaurus gracilis*, which was partially enclosed in a nodule of flint, from the Upper Chalk, at Kemptown, Brighton. The siliceous matter has infiltrated itself into much of the cellular structure of the middle part of the centrum. The densest part of the cellular structure is near the concave surface of the vertebra.

In the Collection of Dr. Mantell, F.R.S., by whose obliging permission it is figured for the present Monograph.

1.3.6 Mosasaurus gracilis. 4.&5. M. Hofmanni.

..nkel del. et lith. Day & Son lith.rs to the Queen

Lacertians.

PLATE 2.

Fig.

1. Part of the lower jaw of *Mosasaurus gracilis*, nat. size.

1*a*. Part of the upper jaw of ditto.

2. Body of a lumbar vertebra of ditto.

3. Body of a dorsal vertebra of ditto.

4. Anterior concave surface of the same vertebra.

5. A mutilated caudal vertebra of *Mosasaurus gracilis*.

5*a*. Anterior view of the same vertebra, showing the much expanded hæmal arch: the specimen has been drawn upside down in both figures.

From the Upper Chalk, at Offham-pit, Sussex. In the Collection of Henry Catt, Esq., of Brighton.

6. Under view of the body of a cervical vertebra of *Plesiosaurus constrictus*.

7. End view of the same vertebra.

From the Steyning Chalk-pit, Sussex.

8. Tooth of a *Plesiosaurus*.

From the Scaddlescombe Chalk-pit, near Lewes, Sussex.

9. Tooth of a *Plesiosaurus*.

10, 11, and 12. Teeth of Mosasauroid Reptiles. From the Sussex Chalk.

From the Southeram Chalk-pit, Sussex.

13. Tooth of a *Plesiosaurus*.

From the Southeram Chalk-pit, Sussex.

14. Part of the crown of a tooth of a Mosasauroid Reptile, facetted as in *Mos. Maximiliani*.

15. Fractured tooth of a *Plesiosaurus*.

From the Southeram Chalk-pit, Sussex.

16. Tooth of *Polyptychodon interruptus*.

17. Base of the same tooth.

From the Chalk, near Valmer, Lewes.

18. Nine dorsal vertebræ of a Lizard (*Coniosaurus crassidens*).

19. Part of the lower jaw and some attached vertebræ of *Coniosaurus crassidens*.

19*a*. A magnified tooth of ditto, from the front of the series.

19′. A magnified hinder tooth of ditto.

20. View of part of the alveolar groove and teeth of ditto.

From the Lower Chalk at Clayton, Sussex. In the Collection of Henry Catt Esq., of Brighton.

All the figures are of the natural size.

From Nature by J. Erxleben

Fossil Reptilia from the Chalk.

Day & Son, Lithrs to the Queen

Lacertians.

PLATE 8.

Fig.

1. Mutilated head and vertebræ of the fore-part of the trunk of *Dolichosaurus longicollis.*
2. Outline of part of the lower jaw, and the same magnified.
   From the Middle Chalk, Kent. In the Collection of Mrs. Smith, of Tonbridge Wells.
3. Portion of the lower jaw, with a tooth in situ, of *Polyptychodon interruptus.*
   From the Chalk of Kent. In the Collection of Mrs. Smith, of Tonbridge Wells.
4. Anterior part of jaws of *Pterodactylus conirostris.*
5. Left side of ditto.
6. Conjoined portions of scapula, 51, and coracoid, 52, of ditto.
7. Portions of one of the wing-bones of ditto.
   From the Barham Chalk-pit, Kent.
8. Crown of the tooth of the *Leiodon anceps.*
9. Base of the same tooth.

All the figures, save fig. 2, 32, are of the natural size.

Fossil Reptiles from the Chalk.

Lacertians.

PLATE 9.

Fig.

1 and 2. Portion of the lower jaw of *Raphiosaurus subulidens.*

3. Two views of part of the alveolar border of ditto.
From the Lower Chalk of Cambridgeshire, in the Collection of James Carter, Esq., of Cambridge.

4. Vertebræ of the hind part of the trunk and pelvis of *Dolichosaurus longicollis.*
From the Middle Chalk of Kent. In the Collection of Sir Philip de Malpas Grey Egerton, Bart., M. P., F. R. S.

5. Four marginal plates of a large *Chelone,* showing the cavities for the ends of the ribs.

6. Outside view of the same marginal plates.
From the Middle Chalk of Kent. In the Collection of Mrs. Smith, of Tonbridge Wells.

7, 8, and 9. Three views of a fractured centrum of the *Mosasaurus gracilis.*
From the Sotheram Chalk-pit, near Lewes. In the Collection of the Rev. H. Hooper, M.A.

10. A group of teeth of the *Ichthyosaurus campylodon.*
From the Lower Chalk of Kent. In the Collection of William Harris, Esq., F.G.S.

On Zinc by Lens Aldous

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Fossil Reptilia from the Chalk

Lacertians.

PLATE 10.

Leiodon anceps, nat. size.

Fig.

1. Part of the lower jaw with teeth.
2. Diagrammatic section of a tooth, showing the pulp-cavity, which contained a siliceous mass, fig. 2′.
   (Copied from the figures in the 'London Geological Journal,' 1846, Pls. iv and vi.)
3. A portion of the same or a similar jaw, with the crowns of the teeth broken away.
4. Upper or alveolar surface of the same portion of jaw.
5. The crown of one of the teeth from the same portion of jaw.

5*. The base of the same tooth.

5**. Outline of the transverse section near the base of the same tooth.

The above specimens are from the Chalk of Norfolk, or to the North of the Thames; and are in the Collection of Edward Charlesworth, Esq., of York.

6. The crown of a tooth of *Leiodon anceps.*
   From the Chalk of Sussex. In the Collection of Henry Catt, Esq., of Brighton.
7. Outline of the transverse section of a tooth of *Mosasaurus Hoffmanni.*
8. Outline of the transverse section of the tooth of *Mosasaurus Maximiliani.*
9. Outline of the transverse section of the tooth of *Mosasaurus gracilis.*

Leiodon anceps.

From Nature on St[illegible]

Day & Son [illegible] the Queen

Plate 1.

Ophidia.—*Palæophis toliapicus.*

Fig.

1. A group of vertebræ and ribs cemented together by the matrix.

2. A chain of thirty vertebræ, in a mass of matrix.

3. Six well-preserved vertebræ, in their matrix.

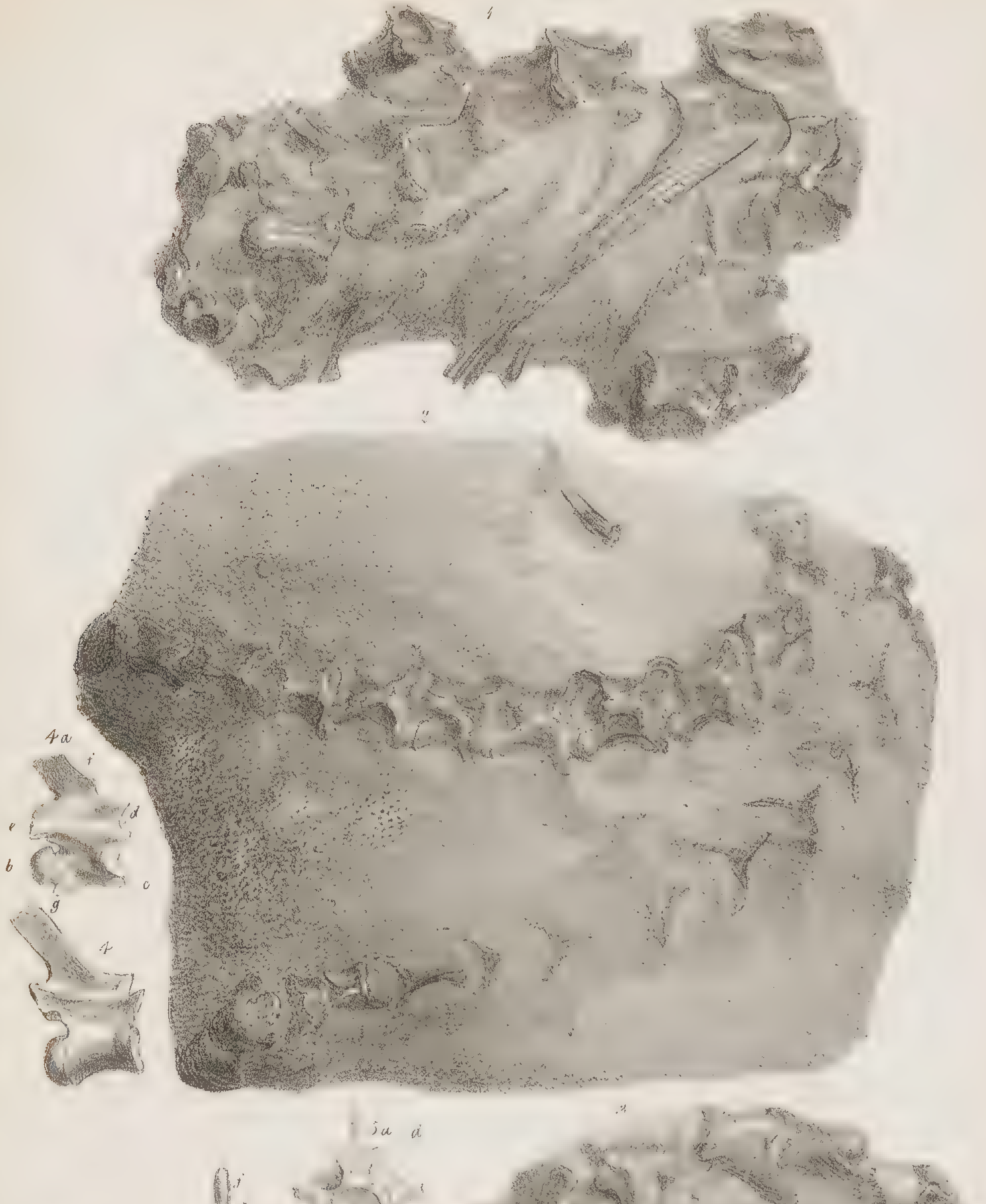
4. A single vertebra.

4 *a.* A corresponding vertebra of a *Python tigris*, twelve feet in length.

5. Front view of a vertebra of *Palæophis toliapicus.*

5 *a.* Front view of a corresponding vertebra of *Python tigris.*

7. Under view of a vertebra of *Palæophis toliapicus.*



Lithog. from Nature by G. Scharf.

Palæophis toliapicus.

Plate 2.

Ophidia.—Recent and Fossil Ophidian Vertebræ; nat. size.

Fig.

1—4. Vertebræ from the middle of the body of a *Python Sebæ*, twenty feet in length.

2,′ 3′. A rib of the same Python.

3″. Section of the proximal end of a rib of the same Python, showing the medullary cavity.

5—8. Vertebræ from the middle of the body of the *Palæophis typhæus*.

9—12. Corresponding vertebræ of a rattle-snake. (*Crotalus.*)

13—16. Corresponding vertebræ of a hooded-snake. (*Naja.*)

17—20. Corresponding vertebræ of a harmless snake. (*Coluber elaphus.*)

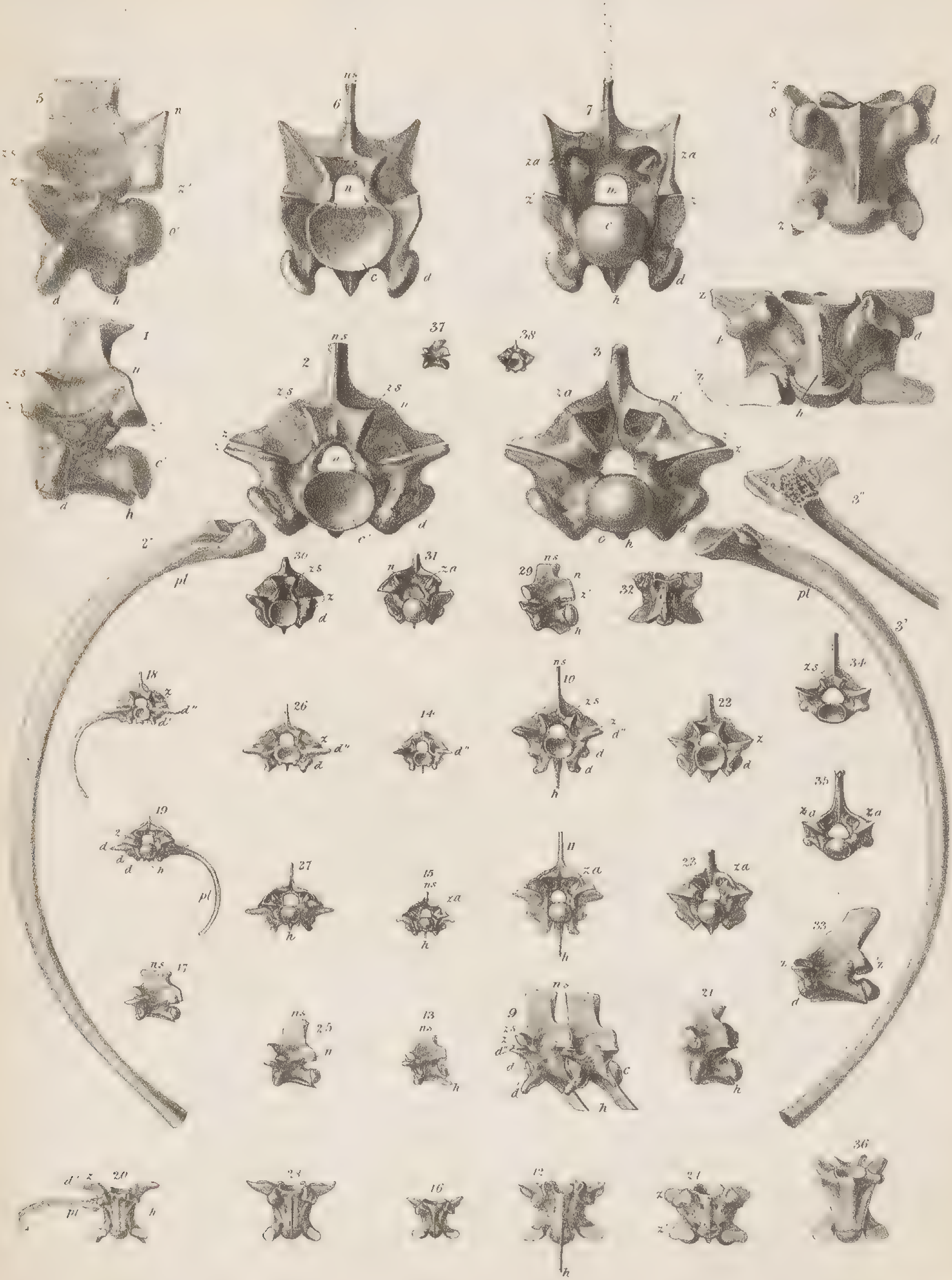
21—24. Corresponding vertebræ of an African *Eryx*.

25—28. Corresponding vertebræ of a sea-snake. (*Hydrus bicolor.*)

29—32. Corresponding vertebræ of *Paleryx rhombifer*.

33—36. Corresponding vertebræ of an Iguana.

37—38. Corresponding vertebræ of *Paleryx depressus*.



J. Dinkel, del et lith

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Plate 3.

Ophidia.—Fossil and Recent Ophidian Vertebræ; nat. size.

Fig.

1—3. A cervical or anterior trunk vertebra of a *Palæophis*.

4. A corresponding vertebra of a *Python tigris*.

5—6. A small vertebra of a Palæophis with one hypapophysis.

7—9. A larger vertebra of the same species.

10—12. A similar vertebra of the same species.

13—15. A small vertebra of *Palæophis porcatus*.

16—17. A large vertebra of Palæophis, longer in proportion to its breadth than

18—20. A type vertebra of *Palæophis porcatus*.

21. A vertebra of *Palæophis porcatus*.

22—24. A middle trunk vertebra of the same species of *Palæophis*, as figs. 1—3.

25. A small vertebra of a *Palæophis*, with an inferior ridge.

26. A large vertebra of do. do.

27. Two views of a vertebra of *Palæophis typhæus*, with the major part of the long neural spine preserved.

28. Two vertebræ of *Palæophis typhæus*, in natural articulation.

29—31. A vertebra of a *Palæophis*, of the compressed kind.

32—34. Two similar but smaller vertebræ of the same kind anchylosed, perhaps from the tail.

35—37. A trunk vertebra of the *Palæophis longus*.

38. Front view of the atlas vertebra of the *Python Sebæ*.

39. Side view of the same vertebra.

40. Side view of the axis vertebra of the same *Python*.

41. Front view of an anterior caudal vertebra of a *Python tigris*.

42. Front view of a middle caudal vertebra of the same Python.

43—44. Two views of a portion of the lower jaw of a lizard or sauroid fish.

45—46. The centrum of a vertebra of the *Palæophis longus*.

With the exception of figs. 35—37 and 45—46, which are from Kingston in Suffolk, all the specimens of *Palæophis* figured in this plate are from Bracklesham, Sussex.

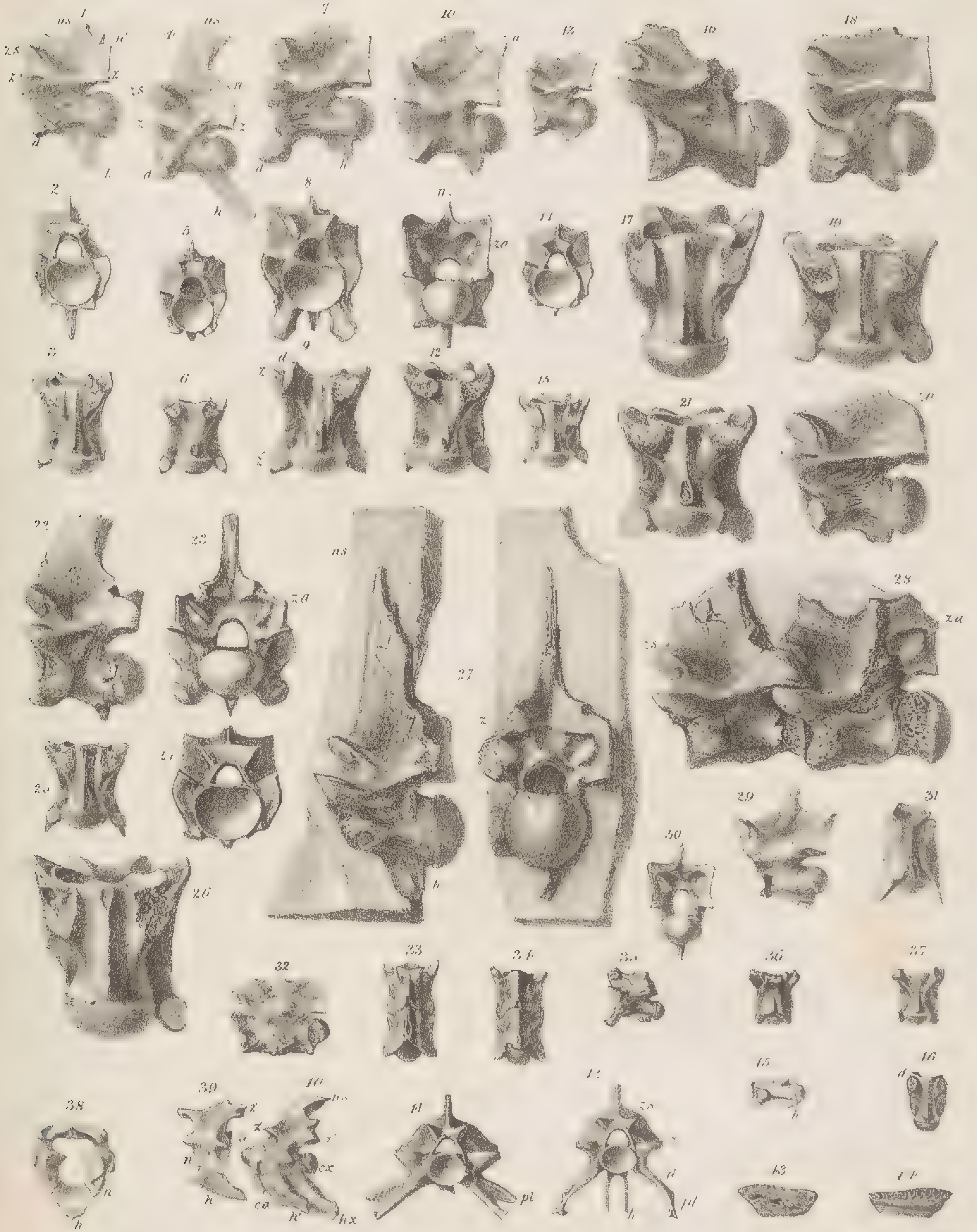


Plate 4.

Ophidia.

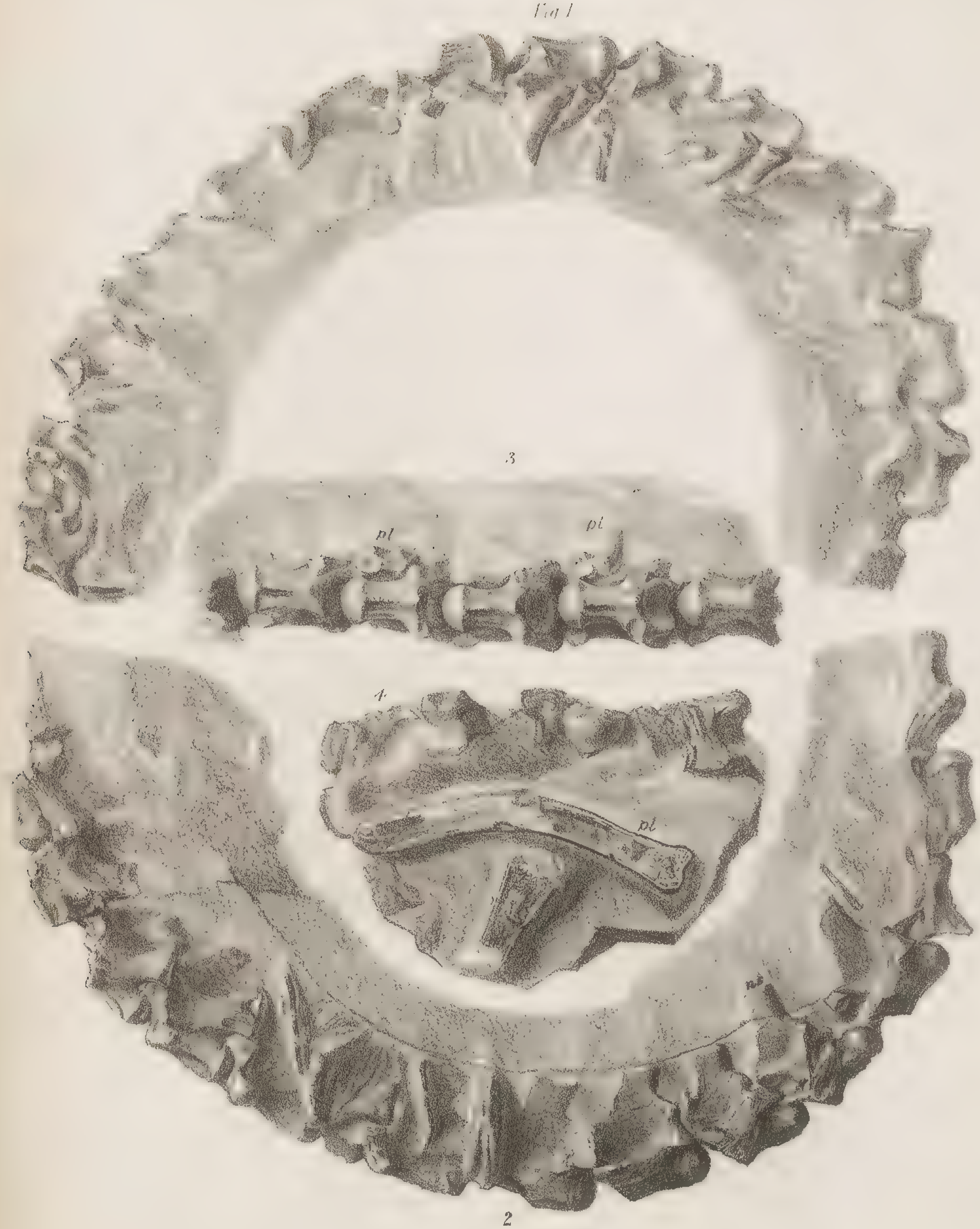
Fig.

1. Left side view of a chain of thirty trunk vertebræ of the *Palæophis toliapicus*, from Sheppy.

2. Right side view of the same vertebræ.

3. Under view of five vertebræ of the same chain, with the articular ends of some of of the ribs.

4. Portion of a group of Palæophis vertebræ from Bracklesham, showing the size and structure of the ribs; natural size



J. Junkel, del. et lith.

Plate 5.

Ophidia.—*Palæophis toliapicus;* nat. size.

Fig.

1. A group of vertebræ, some of which show the long neural spine entire.
2. A group of vertebræ and ribs.
3. Five vertebræ in natural articulation with the diapophysis well preserved.
4. Under surface of four partially dislocated vertebræ.
5. Side view of the same vertebræ; natural size.

Palæophis toliapicus.

Plate 1.

Crocodilia.

Fig.

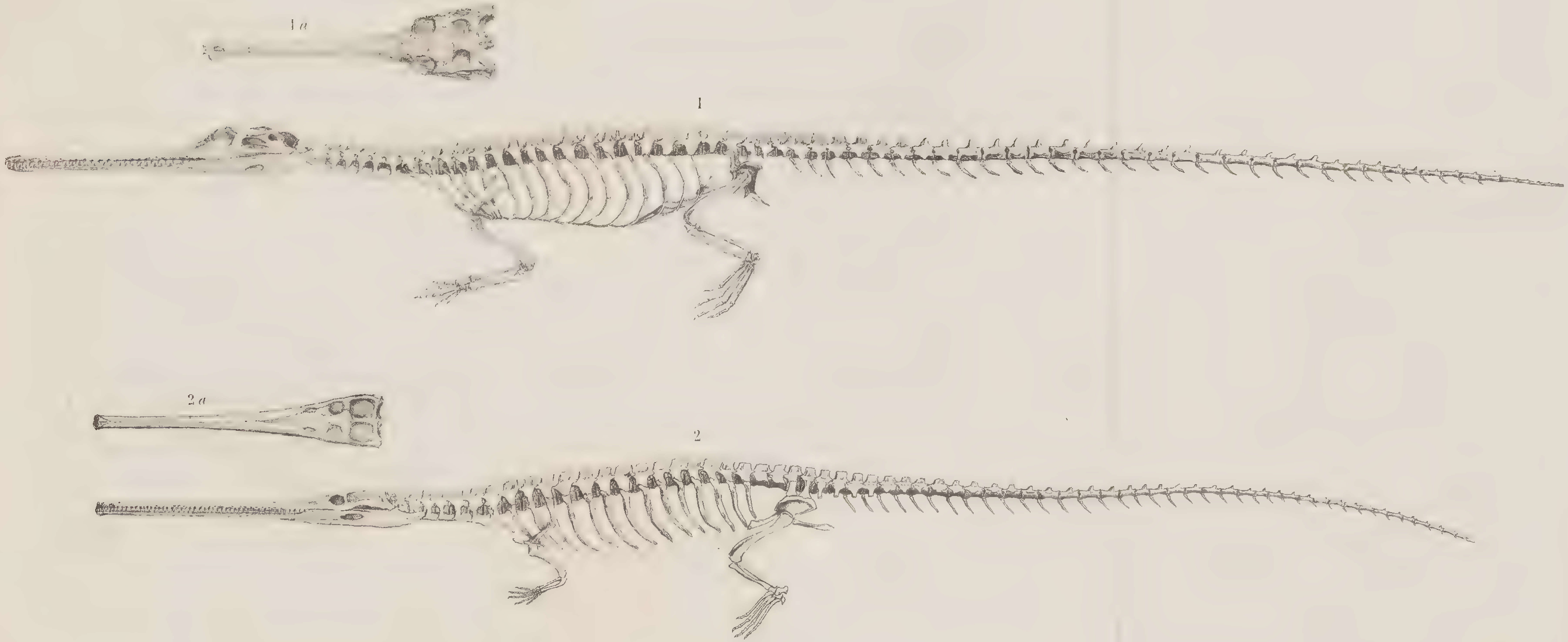
1. Side view of the skeleton of a Gavial.

1 *a*. Upper view of the skull of ditto.

2. Side view of the skeleton of a Teleosaur.

2 *a*. Upper view of the skull of ditto.

On the scale of one inch to a foot.



1. *Modern Gavial of the Ganges* — 2. *Ancient Gavial, or Teleosaur of the Whitby lias.*

Plate 1 *A*.

Crocodilia—*Crocodilus Hastingsiæ*, half the nat. size.

Fig.

1. Upper view of the skull.
2. Back view of ditto.
3. Ectopterygoids (25) and pterygoids (24), with the posterior aperture of the nostril.

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Crocodilus Hastinasiæ. ½.

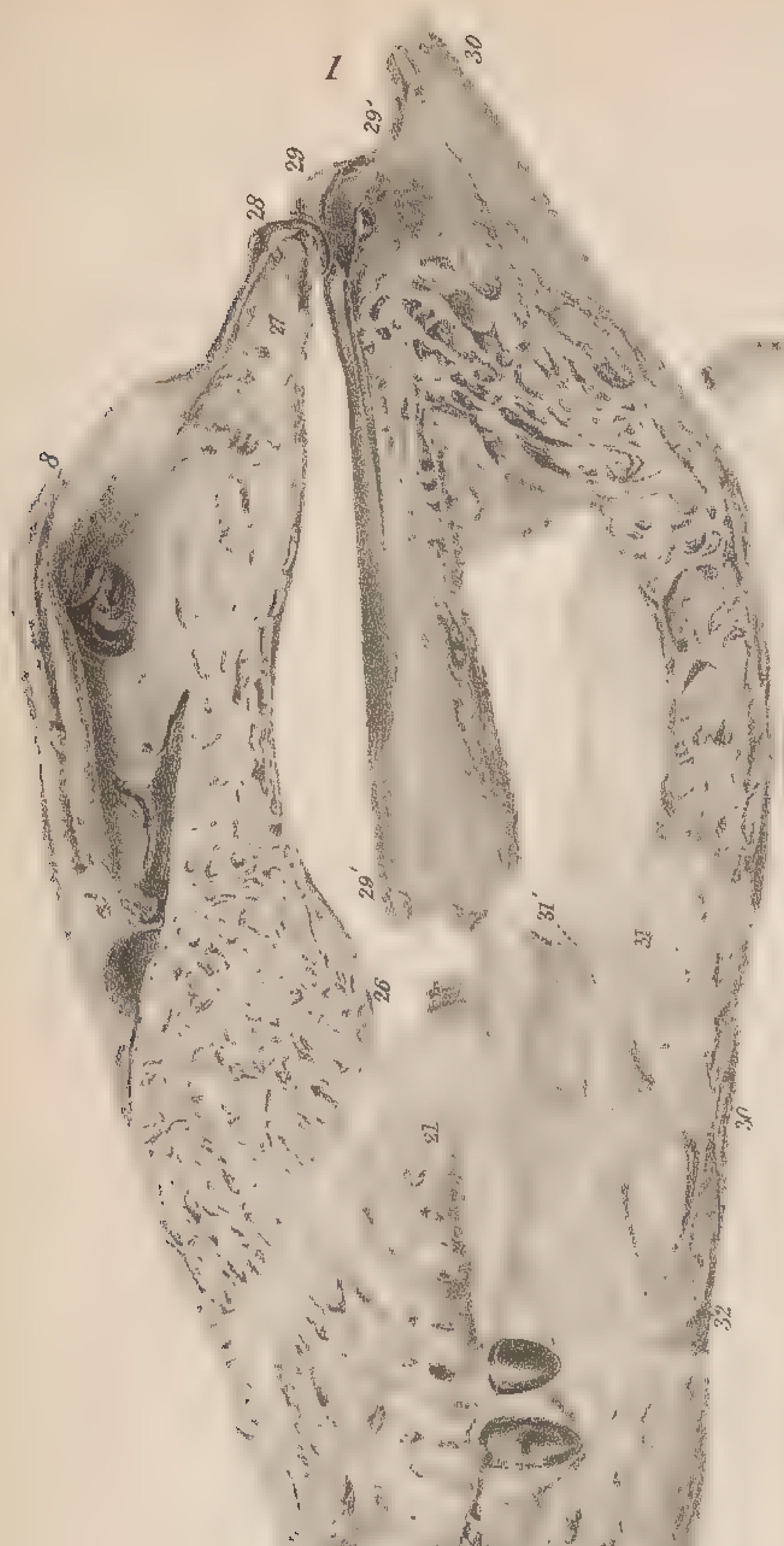
Plate 1 *B*.

Crocodilia—*Crocodilus Hastingsiæ*, half the nat. size.

Fig.

1. Side view of the skull.
2. Under view of the cranial and facial parts of ditto.

1



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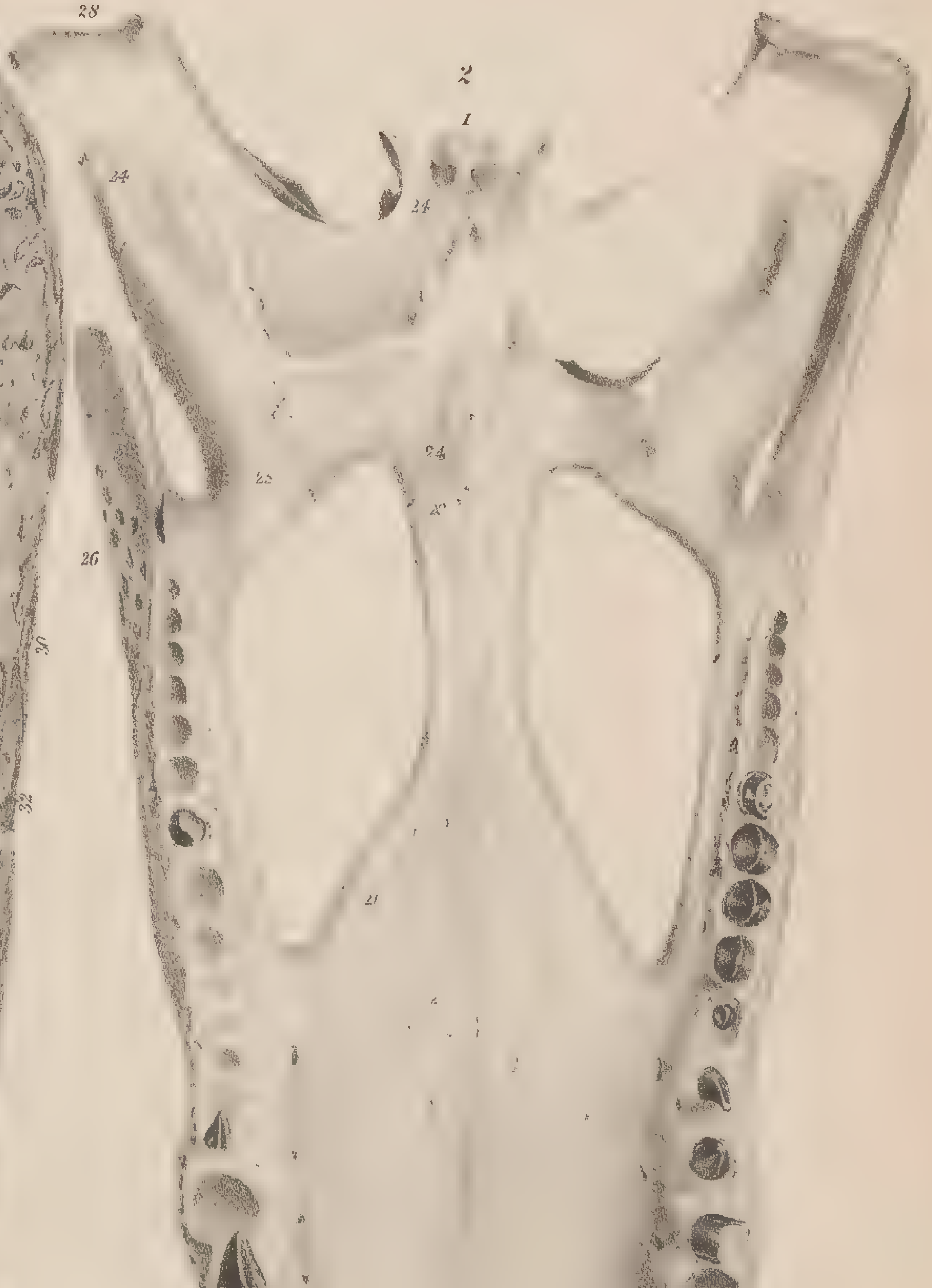

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Crocodilus Hastingsiæ. ½.

Plate 1 c.

Fig.

1. Under view of the fore part of the upper jaw of the *Crocodilus Hastingsiæ*, nat. size.
2. The same view of the *Alligator Hantoniensis*, nat. size.

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1, Crocodilus Hastingsiæ. 2, Alligator Hantoniensis.

PLATE 1 *D*.

Crocodilus Hastingsiæ, nat. size.

Fig.

1. Side view of the fourth cervical vertebra.
2. Back view of the same vertebra.
3. Side view of a similar vertebra, *minus* the pleurapophyses.
4. Under view of the third cervical vertebra.
5. Back view of a lumbar vertebra.
6. Front view of the first sacral vertebra.
7. Side view of the first caudal vertebra.

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Crocodilus Hastingsiæ.

Plate 1*E*.

Fig.

1. Upper surface of the symphysial end of the right ramus of the lower jaw of *Crocodilus biporcatus*.
2. The same part of *Crocodilus Hastingsiæ*.
3. The same part of *Alligator niger*.
4. The hinder part of the right ramus of the lower jaw of *Crocodilus biporcatus*.
5. The same part of *Crocodilus Hastingsiæ*.
6. The same part of *Alligator niger*.

Figures 1, 2, 4, 5, two-thirds, 3 and 6 one half the nat. size.

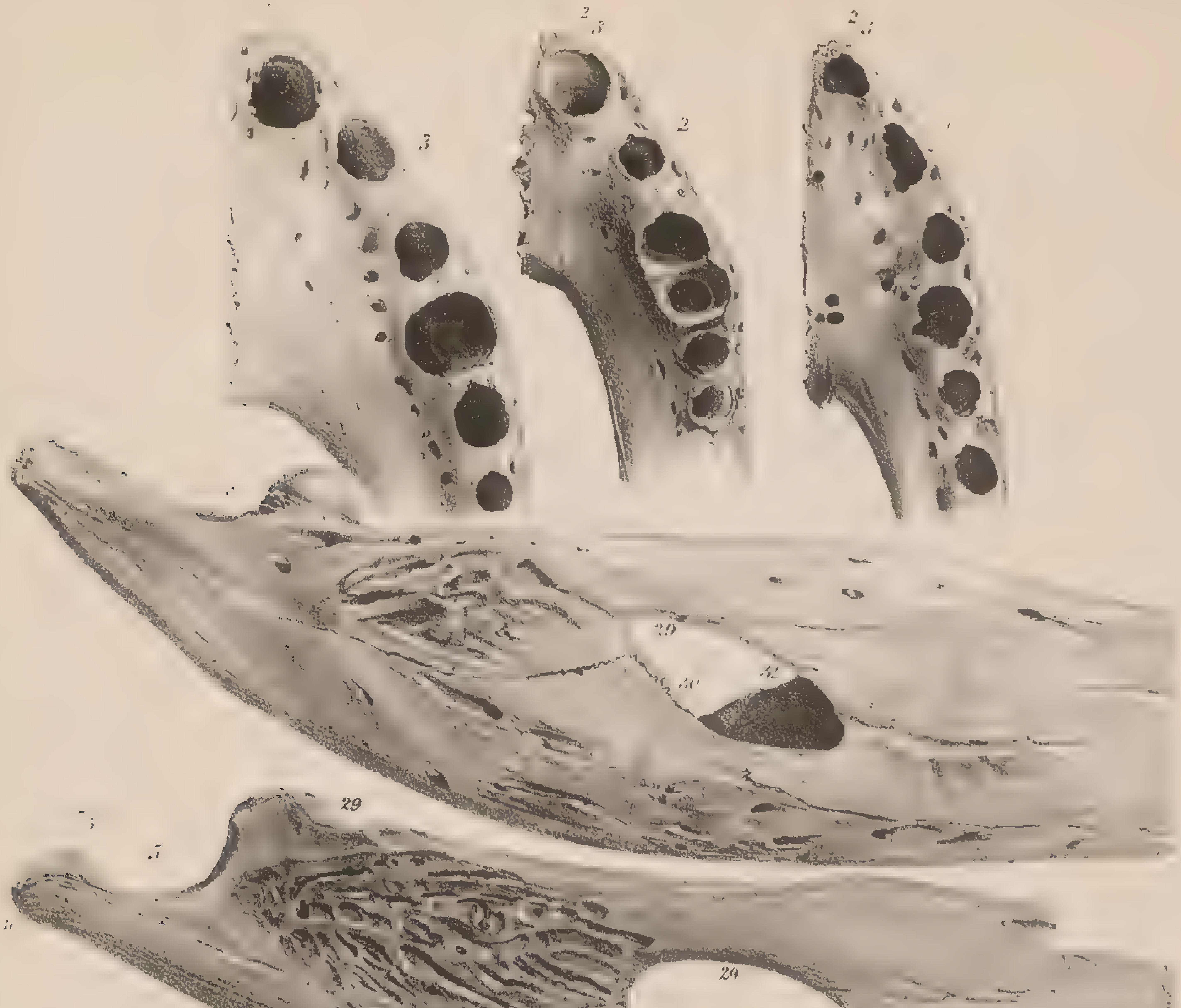

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PLATE *A* 2.

Crocodilus Suchus, half the nat. size.

Fig.

1. Upper view of the skull.
2. Under view of ditto. Both ends of the bony palate have suffered fracture and loss, apparently in the process of mummifying the body of the Crocodile.

J. Erxleben

Crocodilus Suchus. (From an Egyptian Mummy.)

PLATE 2.

Crocodilus toliapicus, one third the nat. size.

Fig.

1. Oblique side view of the skull.
2. Under view of the skull.

Crocodilus Spenceri.

Mintern Bros lith … to the Queen

Plate 2 *A*.

Crocodilus champsoïdes, half the nat. size.

Fig.

1. Upper view of the skull.
2. Under view of the fore part of ditto.
3. Side view of ditto.
4. The left half of the back part of the skull of ditto, nat. size.
5. The point of an anterior young tooth coming into place, nat. size.
6. Half of the crown of one of the large conical teeth, nat. size.
7. One of the shorter and more obtuse posterior teeth, nat. size.

Dayk Son lith. to the Queen

Crocodilus champsoïdes. (1,2,3,½ Nat. Size.)

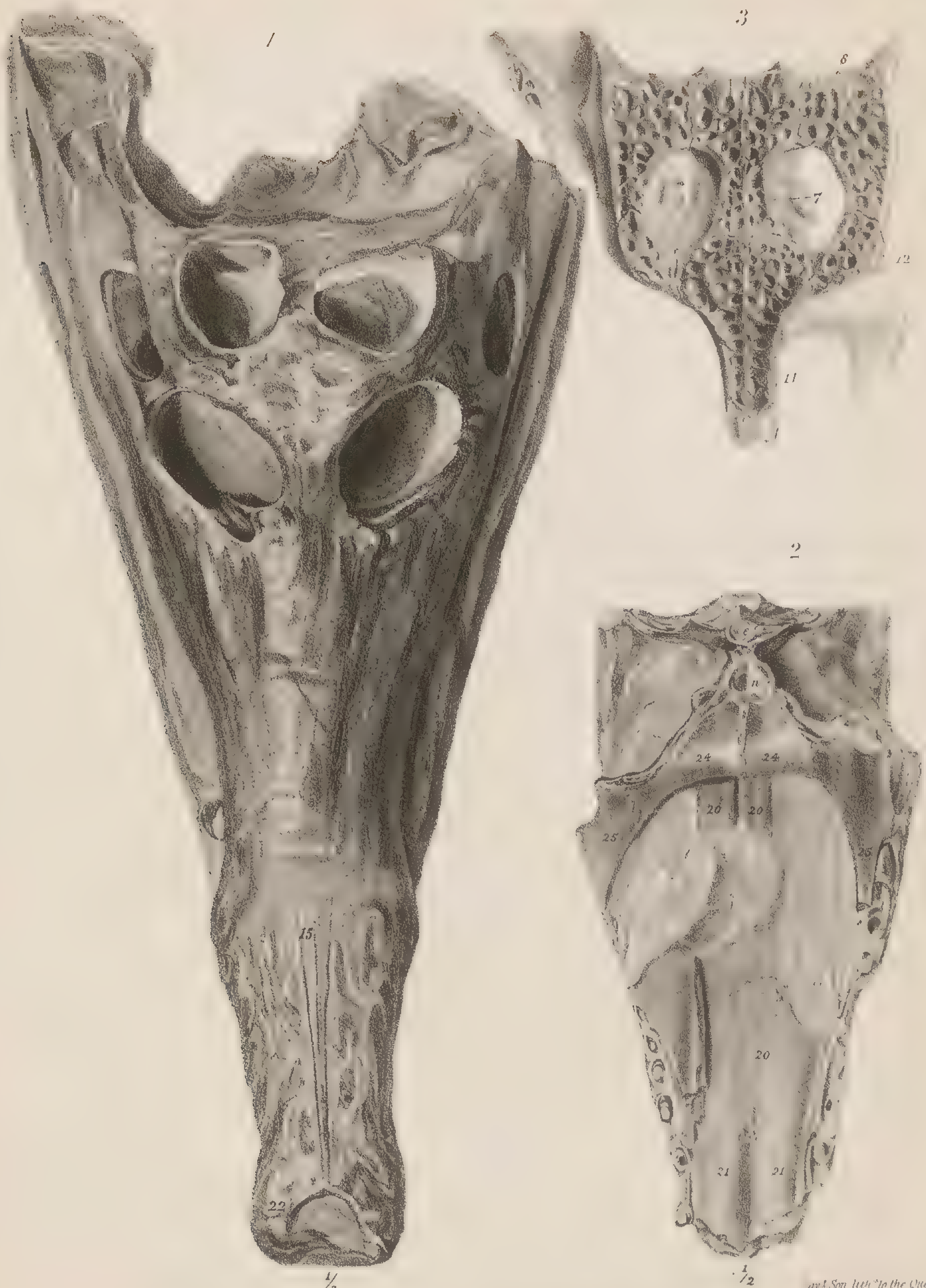
PLATE 2 *B*.

Fig.

1. Upper view of the skull of the *Crocodilus toliapicus*, one third the nat. size.

2. Under view of the hinder portion of the skull of the *Crocodilus champsoïdes*, on which Dr. Buckland founded his species of 'Crocodile with a short and broad snout,' called *Crocodilus Spenceri*; half the nat. size.

3. Upper view of the cranial platform of a young *Crocodilus Hastingsiæ*, nat. size.



From Nat. on Stone by J. Erxleben

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1. Crocodilus toliapicus, 2. Cr. Champsoides, 3 Cr. Hastingsiæ.

Plate 3.

Vertebræ of the *Crocodilus toliapicus*, nat. size.

Fig.

1. Fore part of a mutilated seventh cervical vertebra.
2. Under part of ditto.
3. Side view of a mutilated eighth cervical vertebra.
4. Front view of the same vertebra.
5. Under view of the centrum of a lumbar vertebra.
6. Under view of the centrum of the fourth or fifth dorsal vertebra.
7. Side view of the first caudal vertebra.
8. Side view of a middle caudal vertebra.
9. Under view of the same vertebra.

J. Erxleben lith.

Crocodilus Spenceri.

Plate 3 *A*.

Fig.

1. Side view of the fourth cervical vertebra (mutilated) of the *Crocodilus toliapicus.*
2. Under view of the same, showing the shape of the *hypapophysis h.*
3. Side view of the sixth cervical vertebra (mutilated) of ditto.
4. Side view of the first dorsal vertebra (mutilated) of the *Crocodilus champsoïdes.*
5. Front view of the anterior sacral vertebra (mutilated) of the *Crocodilus toliapicus.*
6. Side view of the same vertebra.
7. Side view of the third cervical vertebra (mutilated) of the *Crocodilus champsoïdes.*
8. Under view of the same vertebra.
9. Side view of a posterior dorsal vertebra (mutilated) of the *Crocodilus champsoïdes.*
10. Side view of the centrum of the first caudal vertebra of ditto.
11. An anterior tooth of the *Crocodilus champsoïdes.*
12. A posterior tooth of the *Crocodilus toliapicus.*

All the figures are of the natural size.

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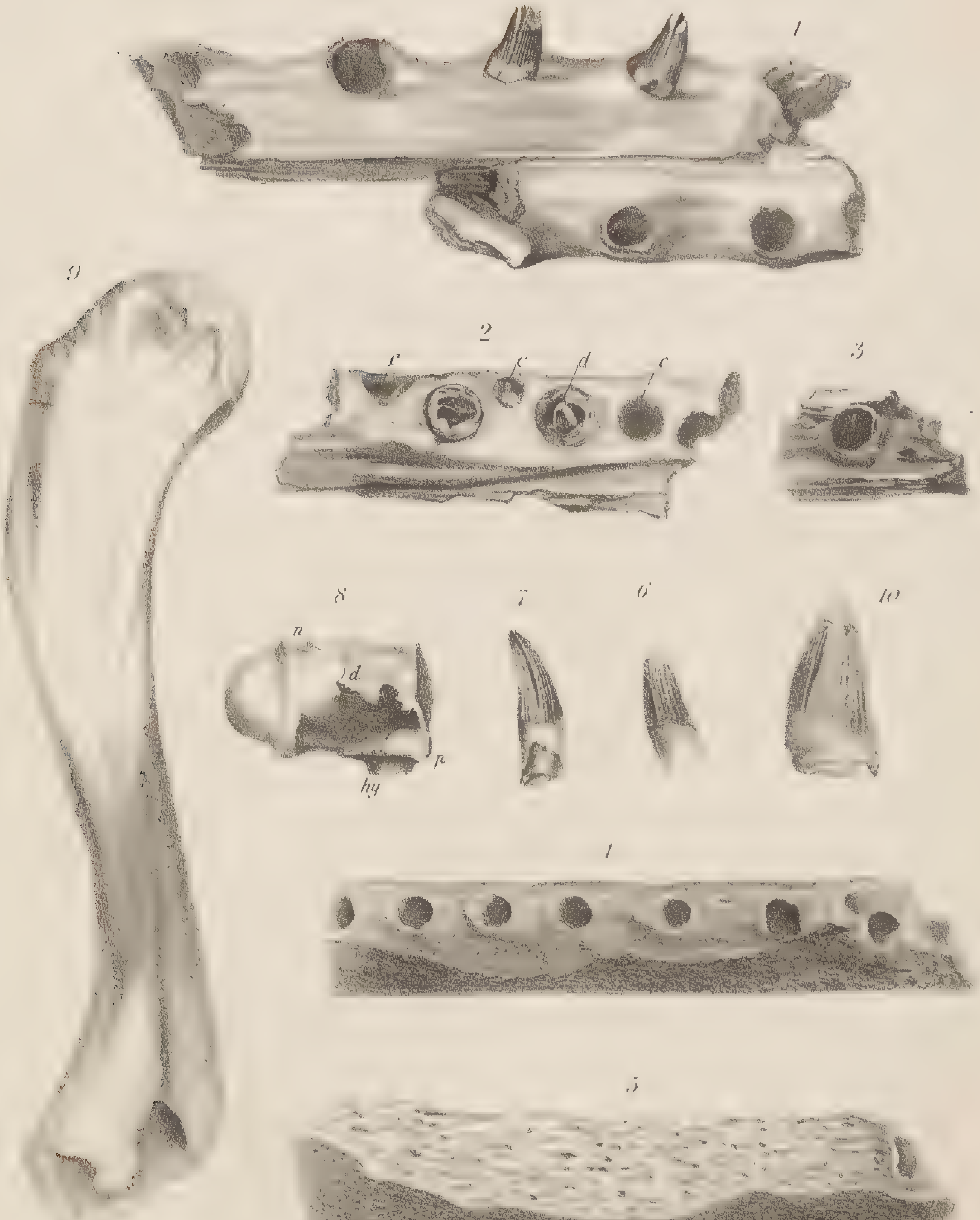
1_6 & 12, Crocodilus Spenceri. 7_11, Crocodilus champsoïdes.

PLATE 3 *B*.

Gavialis Dixoni, nat. size.

Fig.

1. A fragment of the symphysis of the lower jaw.
2. A fragment of one of the rami from the back part of the symphysis, showing the depressions *cc*, in the interspaces of the alveoli.
3. The fractured under part of a fragment of the same (*d*) jaw, exposing the hollow base of a young tooth.
4. A fragment of a ramus forming the long symphysis of the under jaw of a younger individual of the same species; upper surface.
5. Under side of the same fragment.
6. A portion of a tooth of the same species of Gavial.
7. A tooth with the germ of its successor, which has entered its base, of the same Gavial.
8. The centrum of a cervical vertebra of the same Gavial.
9. The femur of the same Gavial.
10. The crown of a tooth of a large Crocodilian from Bracklesham.



On Stone by J. Erxleben

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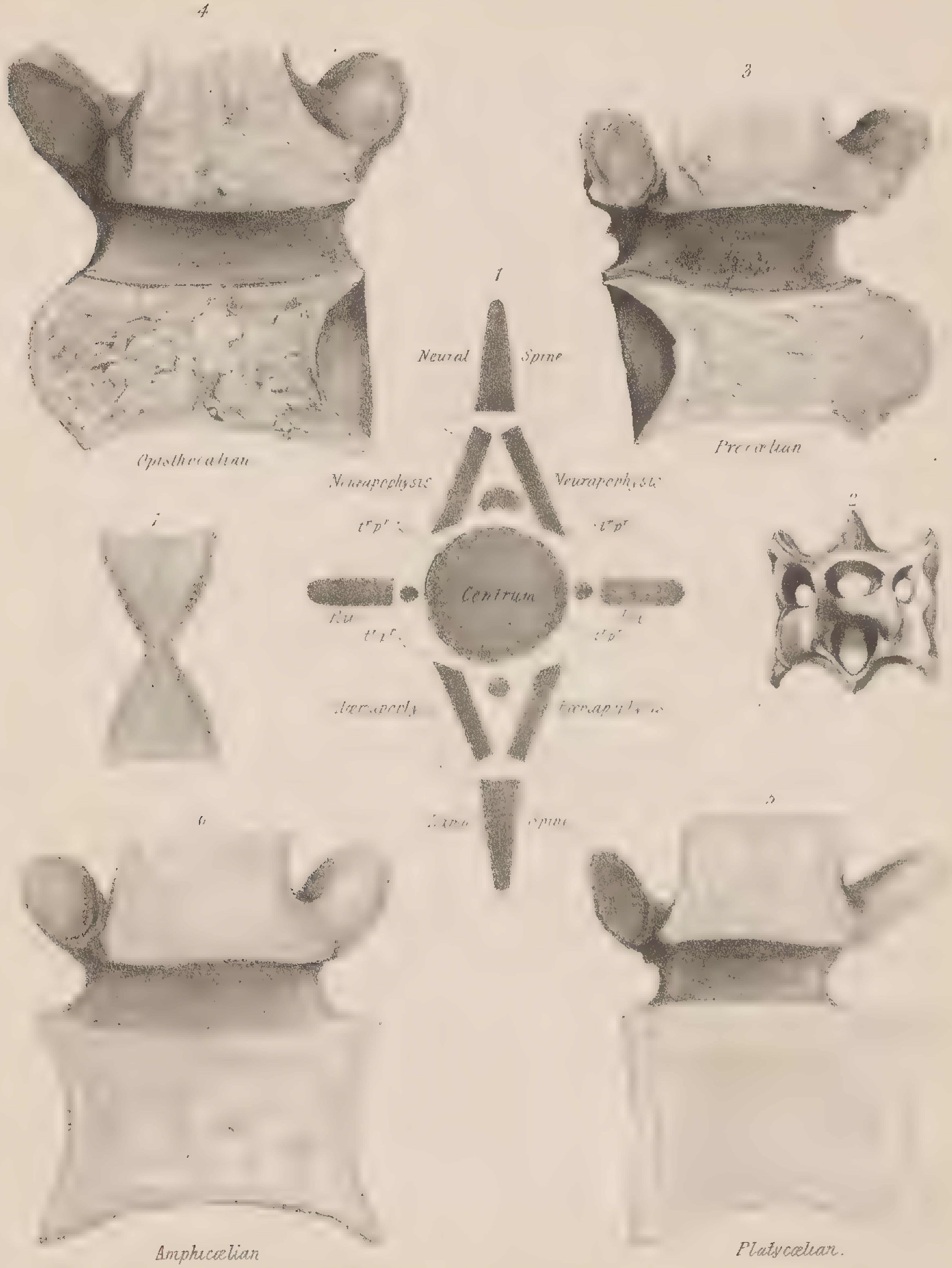
Gavialis Dixoni.

Plate 4.

Crocodilia.—Vertebral Elements and Systems.

Fig.

1. Diagram of the typical vertebra.
2. Back view of a lower cervical vertebra of a Bird (*Pelecanus onocrotalus*), showing the four canals about the centrum: the upper or neural canal formed by the neurapophyses; the side canals for the vertebral arteries and sympathetic nerves formed by the parapophysis, diapophysis, and pleurapophysis; the lower canal formed by the perforation of the hypapophysis, analogous to the hæmal arch in the tail.
3. A vertical longitudinal section of the dorsal vertebra of a Crocodile (*Crocodilus biporcatus*), showing the anterior concavity and posterior convexity of the centrum, forming the characters of the 'procœlian' type of vertebra.
4. A vertical longitudinal section of an anterior dorsal vertebra of the *Streptospondylus Cuvieri*, showing the anterior convexity and posterior concavity of the centrum, forming the characters of the 'opisthocœlian' type of vertebra.
5. A vertical longitudinal section of a middle dorsal vertebra of the *Cetiosaurus medius*, showing the anterior flatness and posterior concavity of the centrum, forming the characters of the 'platycœlian' type of vertebra.
6. A vertical longitudinal section of the dorsal vertebra of the *Teleosaurus Chapmanni*, showing the concavity of both ends of the centrum, forming the character of the 'amphicœlian' type of vertebra.
7. A similar section of the centrum of the dorsal vertebra of a young *Ichthyosaurus communis*, showing the extreme degree of the amphicœlian character in that genus.



Vertebral Elements and Systems.

PLATE 5.

CROCODILIA.—*Suchosaurus.*

FIG.

1. Articular end of centrum of a dorsal vertebra.
2. Under surface of do.
3. Side view of centrum and part of neural arch of a smaller dorsal vertebra.
4. Crown of a tooth of *Suchosaurus lævidens*, side and back view.
5. Crown of a tooth of *Megalosaurus*.

All the figures are of the natural size.

From the Wealden of Sussex.

Suchosaurus.

PLATE 6.

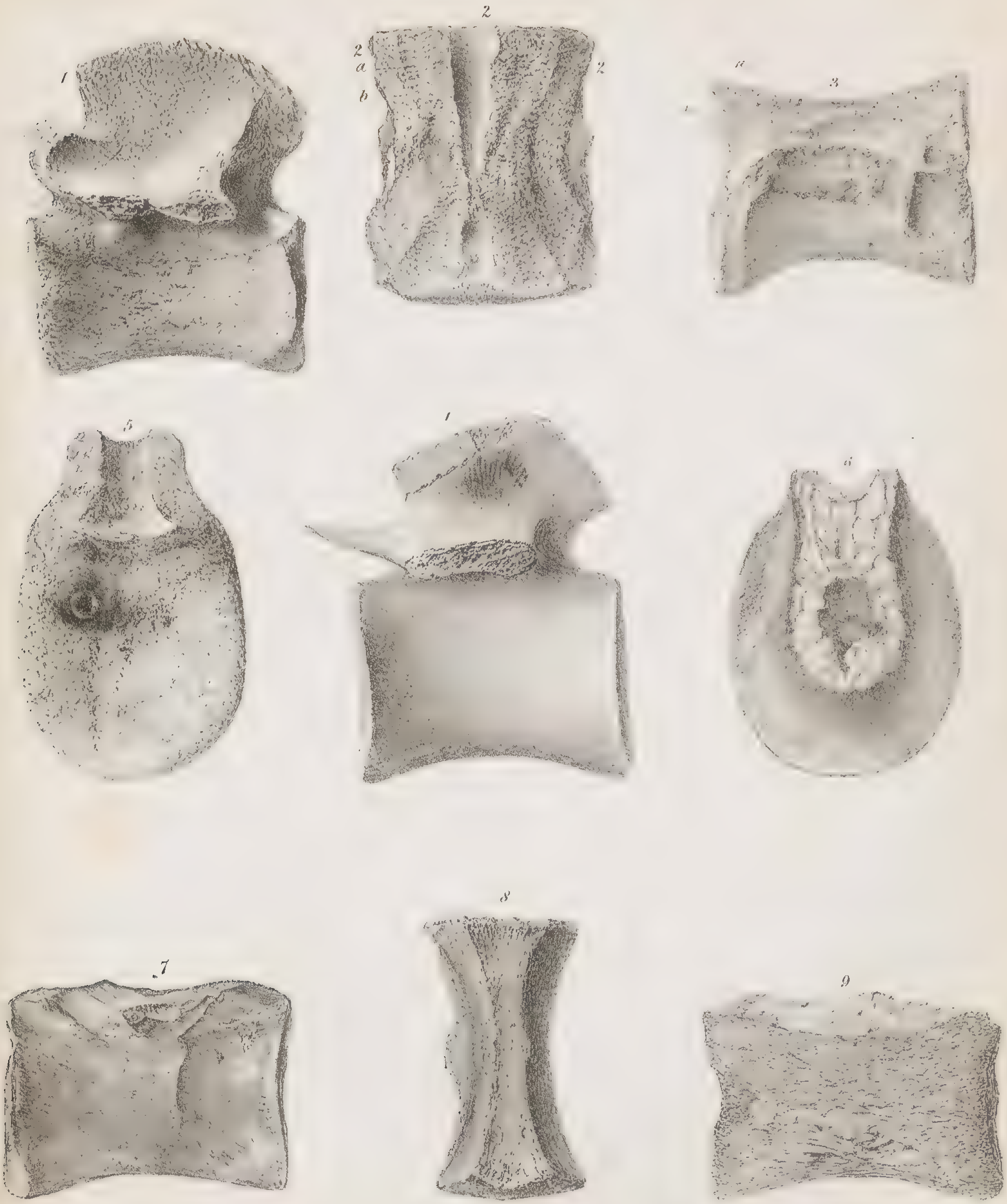
CROCODILIA.—*Poikilopleuron.*

FIG.

1. Side view of a dorsal vertebra, *Poikilopleuron Bucklandi.*
2. Upper view of centrum of do.
3. Side view of do.
4. Side view of a dorsal vertebra of do.
5. End view of the same vertebra.
6. Transverse vertical section of do.
7. Side view of do.
8. Under view of do.
9. Vertical longitudinal section of do.

All the figures are of the natural size.

From the Wealden of Sussex and the Isle of Wight.



Lens Aldous, del.t et Zinc.

Vertebræ.

Day & Haghe Lith.rs to the Queen.

PLATE 7.

Crocodilia.—*Goniopholis crassidens.*

Reduced view of a slab of Purbeck Limestone, including parts of the skeleton. A figure of the two teeth retained in the portion of mandible is subjoined, of the natural size.

From the Purbeck of Swanage, Dorsetshire.

Nat. Size

Lens Aldous del et Zinc

Day & Haghe Lithrs to the Queen

Goniopholis crassidens

PLATE 8.

CROCODILIA.—*Goniopholis crassidens.*

FIG.

1. Under side of a dorsal scute; natural size.
2. Upper side of the same.

From the Purbeck of Swanage, Dorsetshire.

Fig. 1.

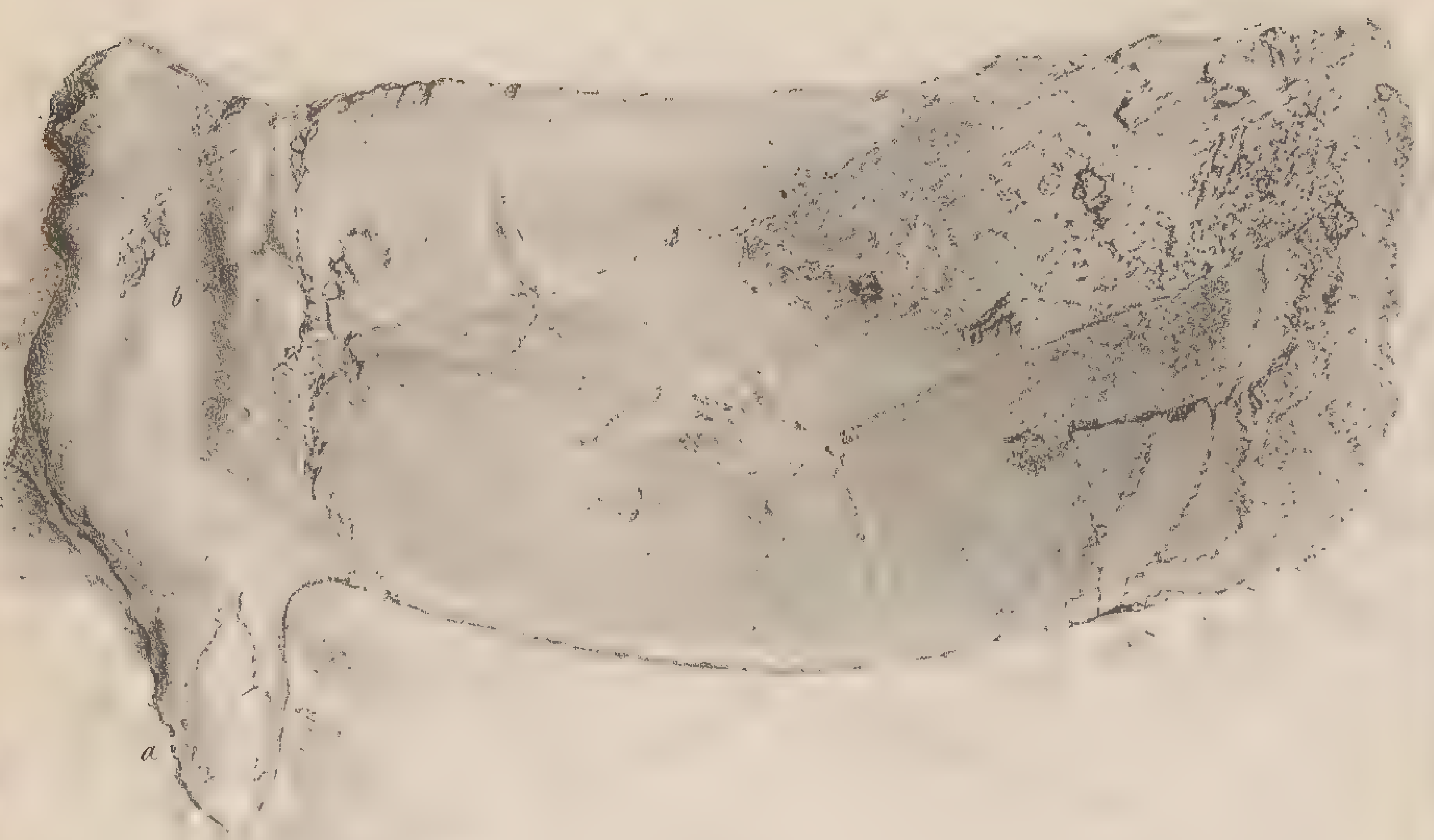
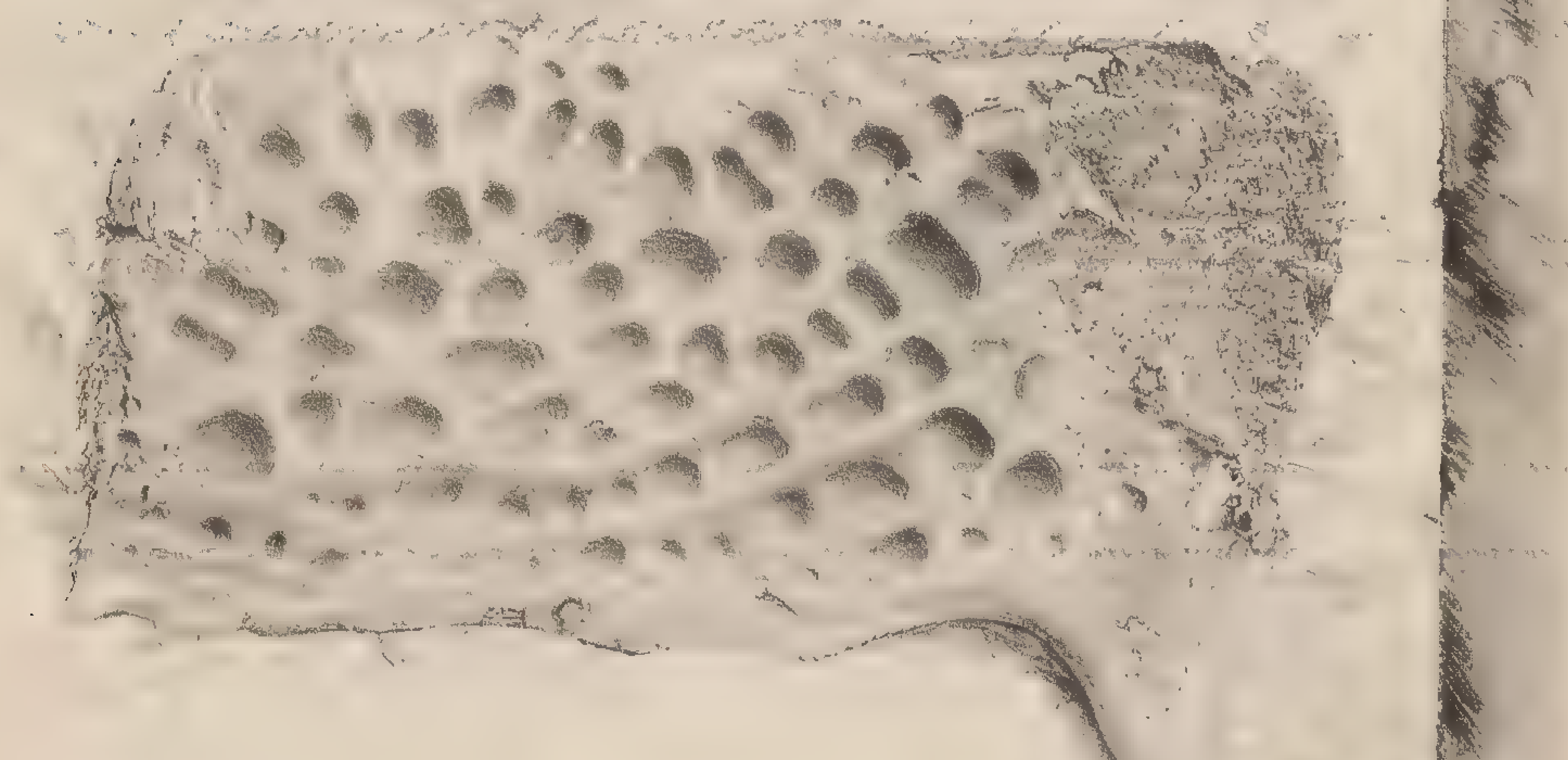


Fig 2



Goniopholis crassidens

PLATE 9.

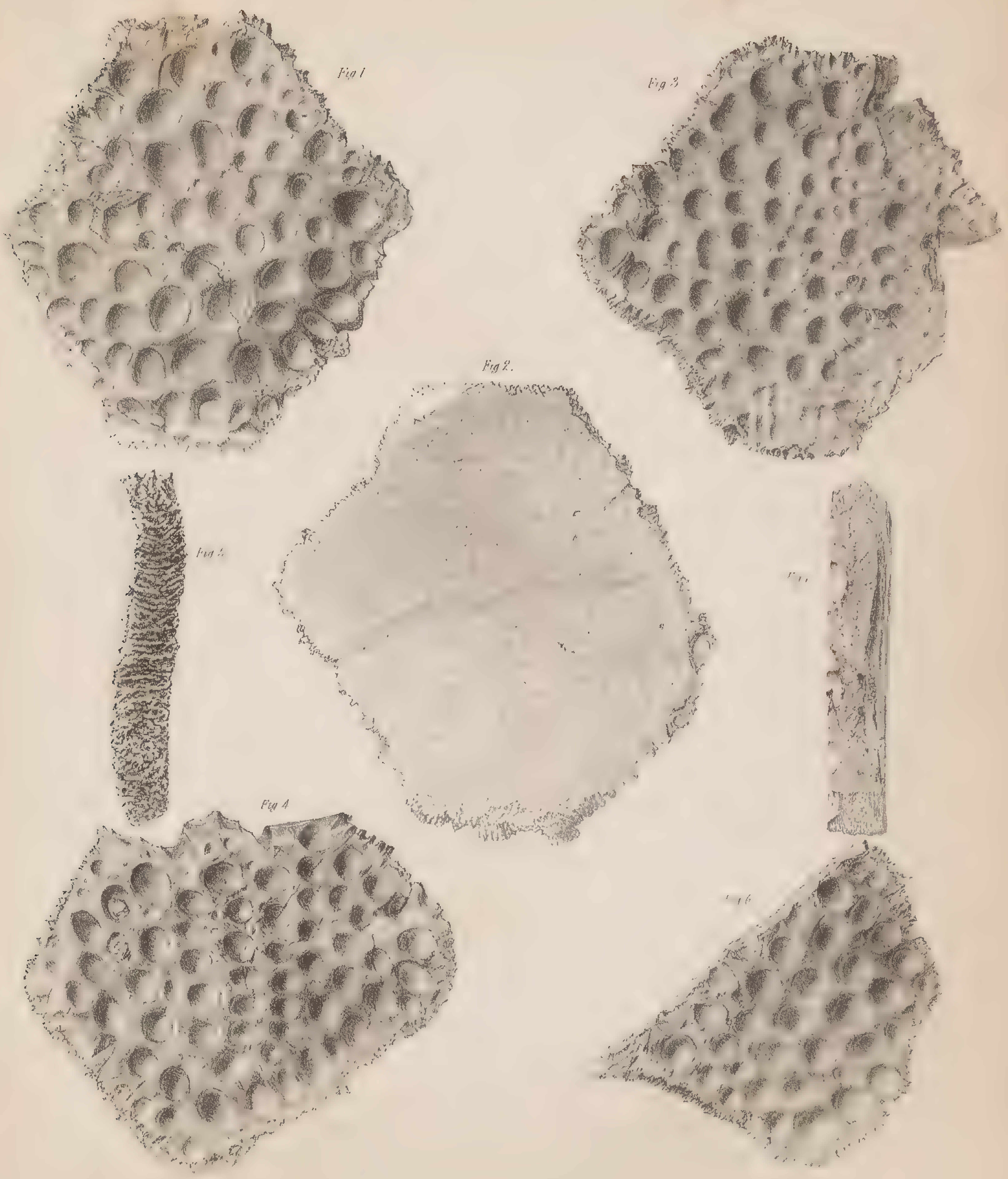
CROCODILIA.—*Goniopholis crassidens.*

FIG.

1. Outer surface of a lateral scute.
2. Inner surface of do.
3. Outer surface of a lateral scute.
4. Ib. of a portion of do.
5. Sutural margin of do.
6. Portion of lateral scute.
7. Section of do.

All the figures are of the natural size.

From the Wealden of Cuckfield.



Lens Aldous del et lith

Day & Haghe Lithrs to the Queen

Goniopholis.

PLATE 10.

CROCODILIA.—*Goniopholis crassidens.*

FIG.

1, 2, 3. Side view of the centrum of cervical vertebræ.

4. Under view of fig. 1.

5. Upper view of do.

6. Side view of anterior dorsal vertebræ.

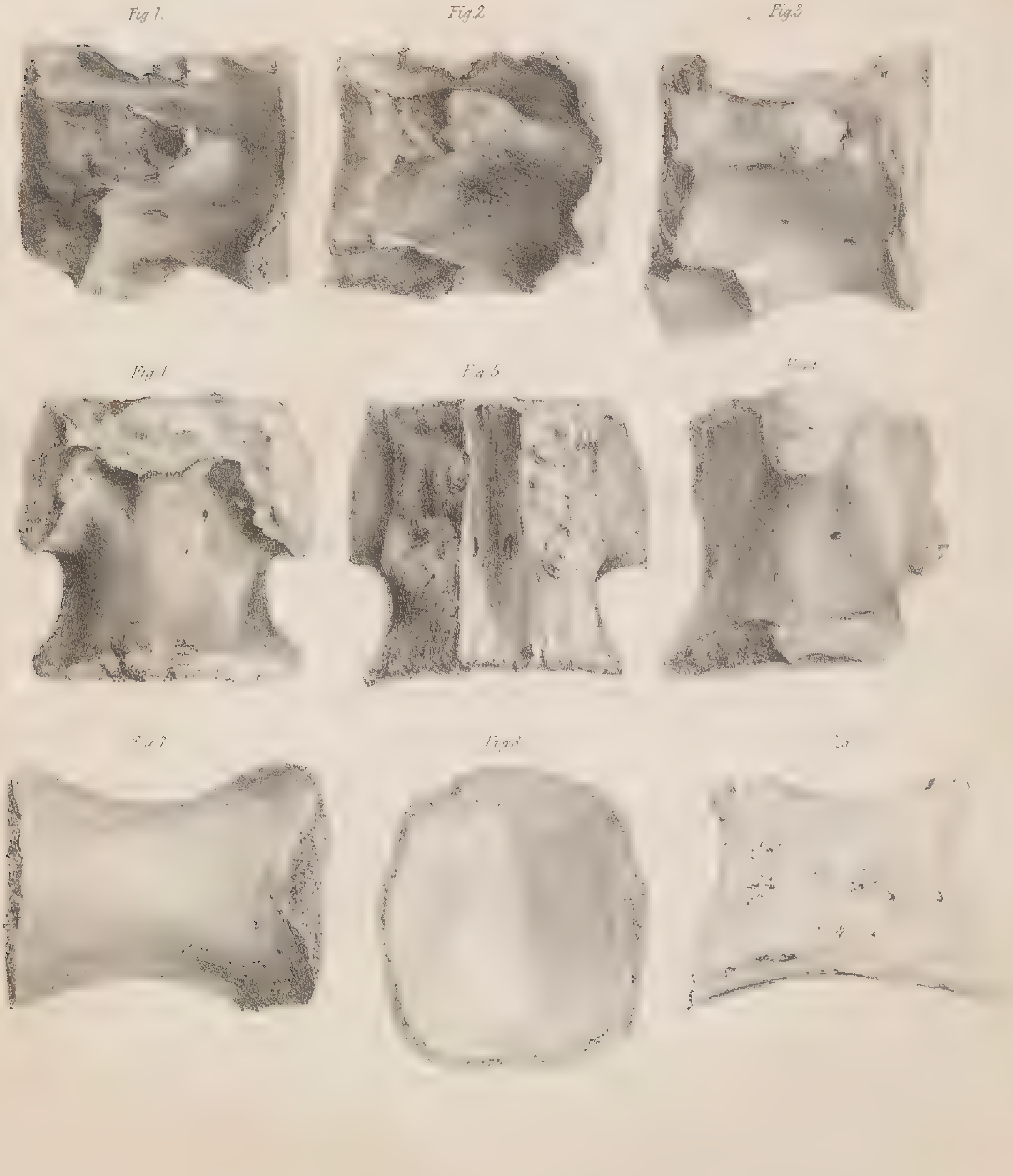
7. Under view of do.

8. End view of do.

9. Vertical longitudinal section, contrasting with the character of fig. 9, Plate 6.

All the figures are of the natural size.

From the Wealden Clay of Cuckfield.



Goniopholis.

Day & Haghe Lith^rs to the Queen. J. Erxleben del. et lith.

PLATE 11.

Crocodilia.—*Goniopholis crassidens.*

Fig.

1. Fore end of upper jaw, showing external nostril.
2. Palatal surface of the same, with sockets of incisors.
3. Crown of mandibular tooth.
4. Portion of mandible and teeth.

All the figures are of the natural size.
From the Wealden Clay of Cuckfield.

Fig. 1

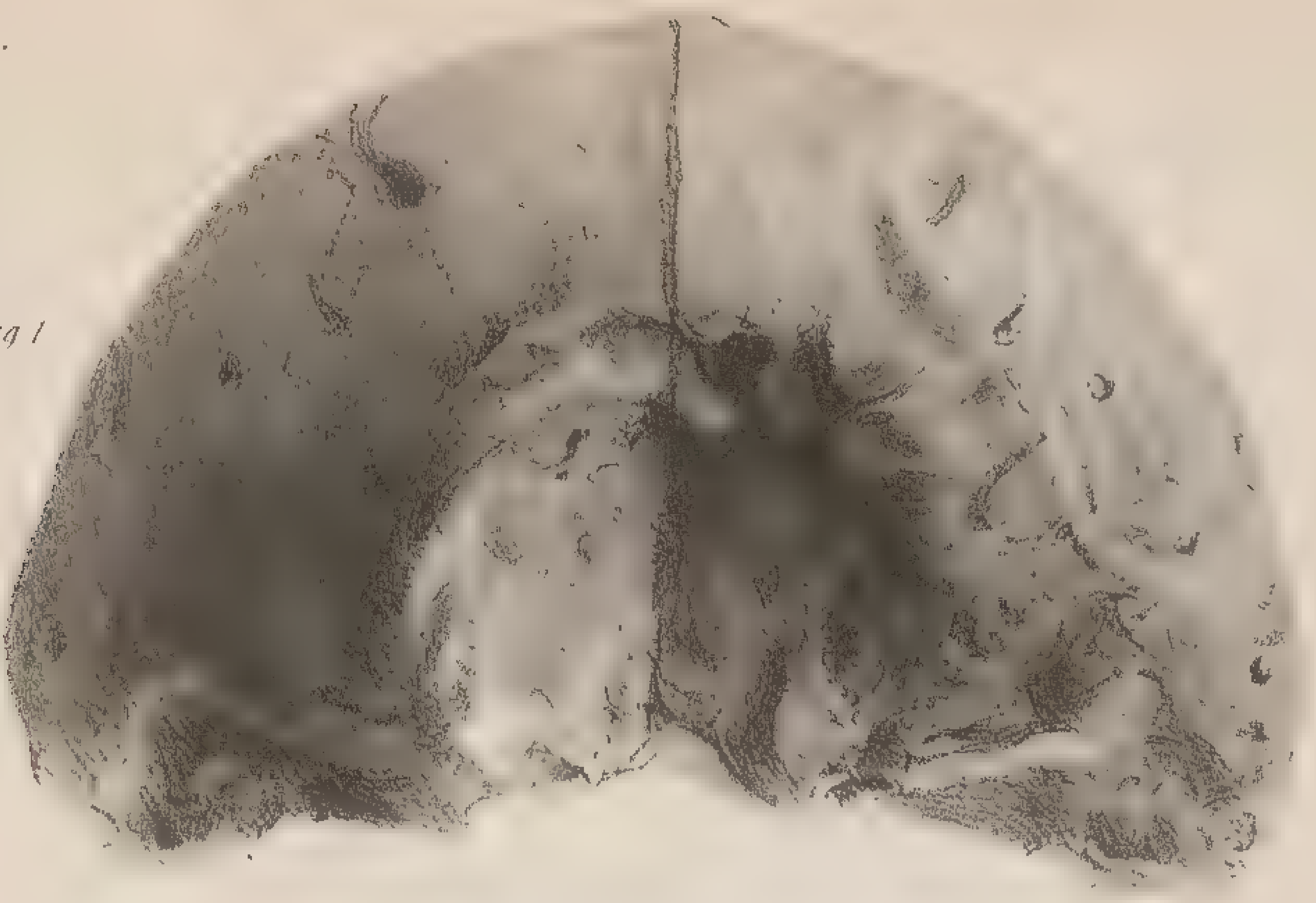


Fig. 3

Fig. 4

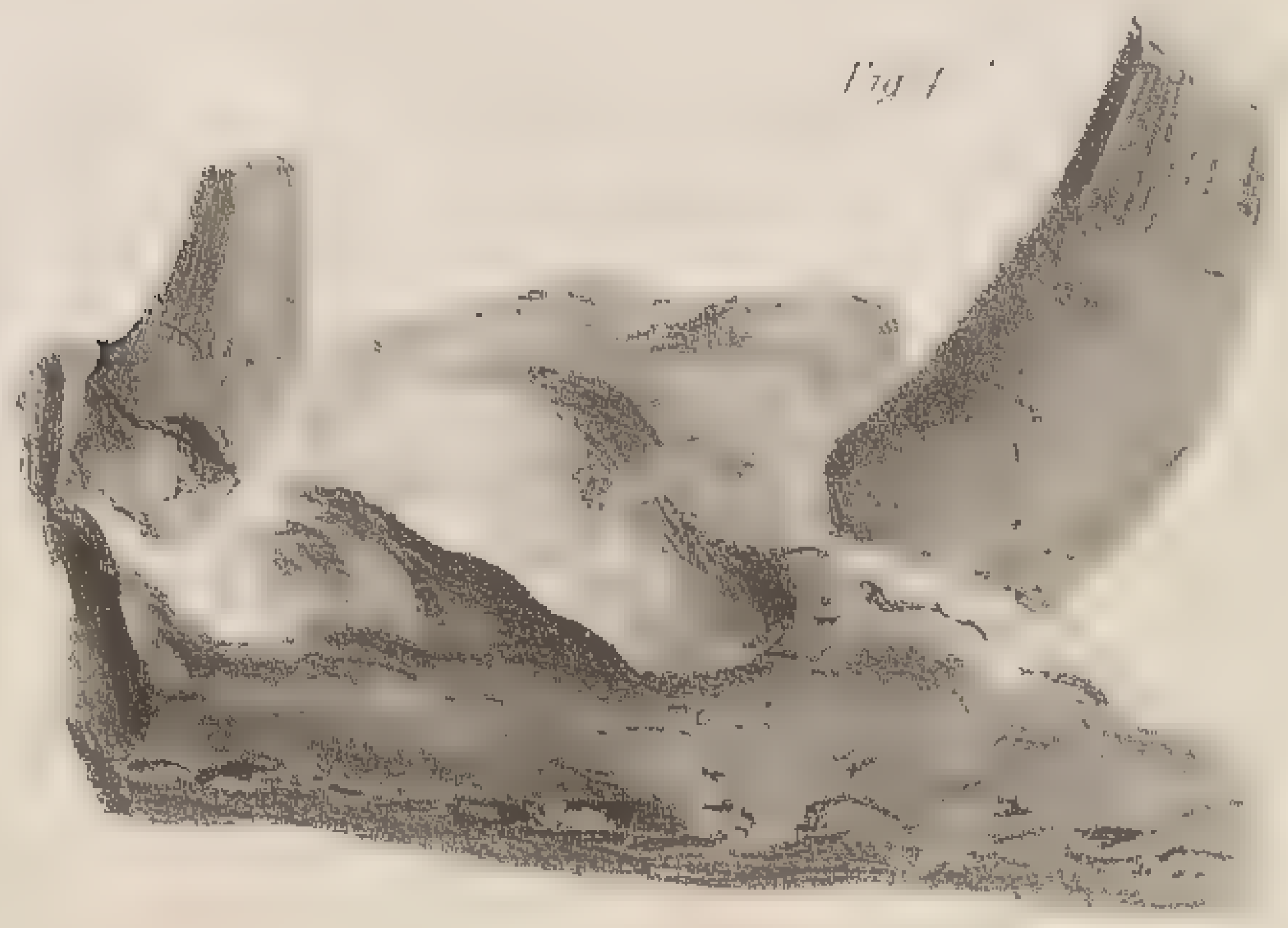
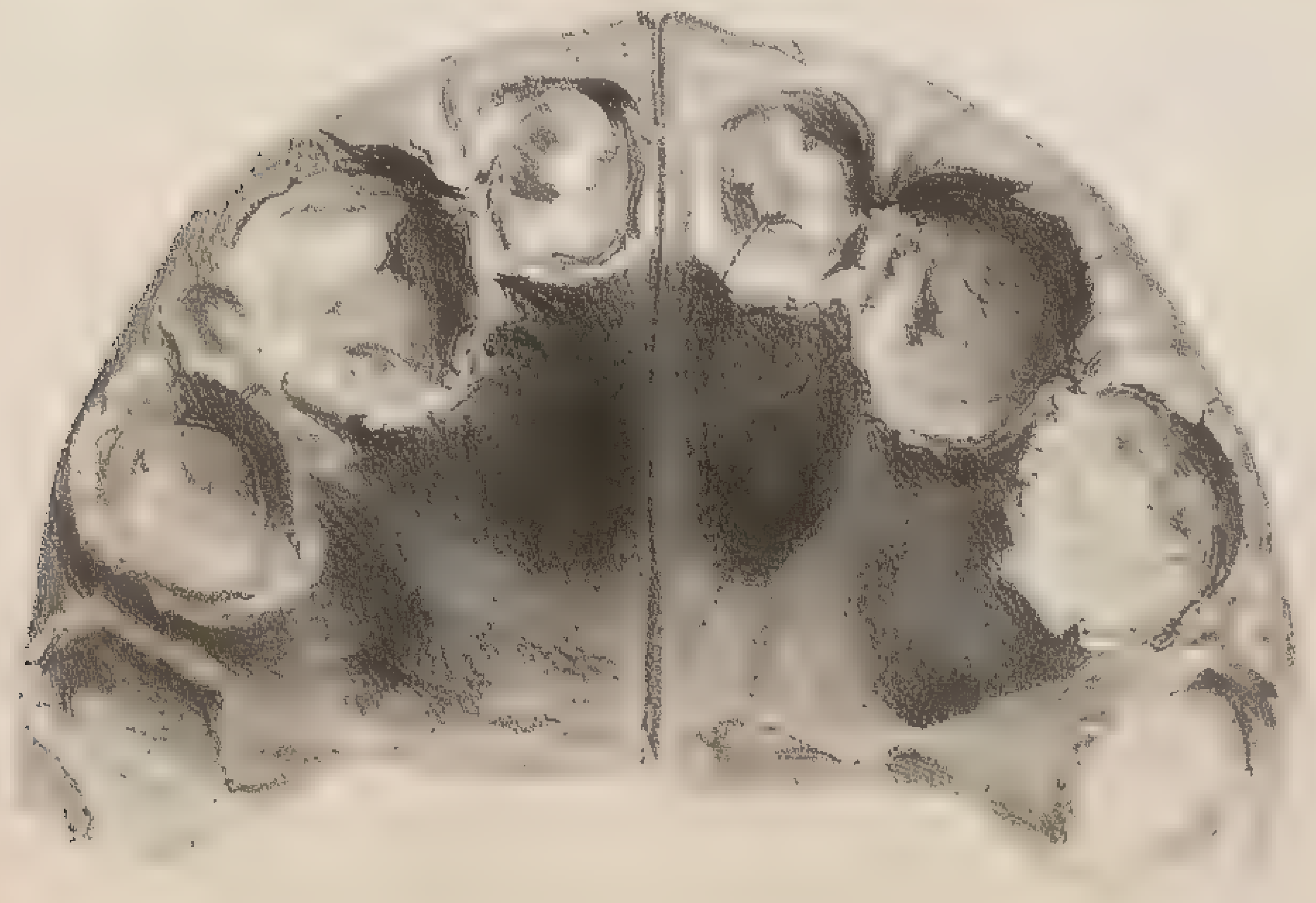


Fig. 2.



Goniopholis

PLATE 12.

Crocodilia.—*Goniopholis crassidens.*

Fig.

1. Fragment of symphysial end of mandibular ramus, showing base of a tooth.
2. Another portion of the same mandible, showing part of the crown; *a*, of a successional tooth.
3. Portions of the maxillary and mandibular bones of the same individual.

3 *a*. Side view of a portion of the same mandible.

4. Upper view of the same portion, showing the hind end of the mandibular symphysis.

All the figures are of the natural size.

From the Wealden Clay of Cuckfield.

Goniopholis

PLATE 13.

Crocodilia.—*Goniopholis crassidens.*

A slab of Wealden Clay-stone, with parts of the endo- and exo-skeletons, showing the toothed and hexagonal scutes in association.

From the Wealden of Cuckfield.

Day & Haghe Lithrs to the Queen

Goniopholis.

PLATE 14.

CROCODILIA.—*Goniopholis carinatus.*

FIG.

1 and 2. Side view of centrums of cervical or anterior dorsal vertebræ.

3. Side view of centrum of an anterior dorsal vertebra.

4. Under view of Fig. 1.

5. Under view of Fig. 4.

6. End view of Fig. 2.

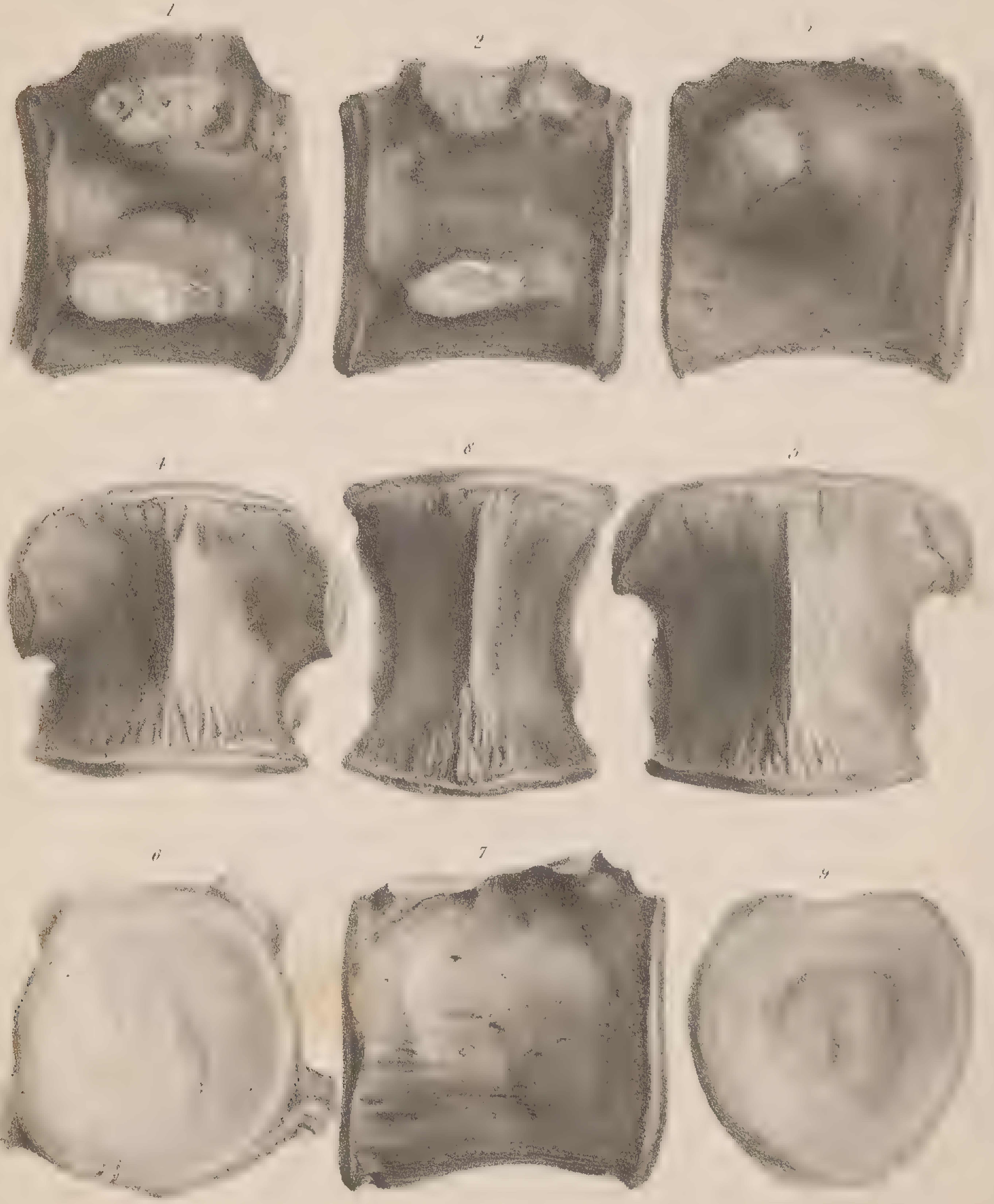
7. Side view of centrum of a posterior dorsal vertebra.

8. Under view of the same centrum.

9. End view of the same centrum.

All the figures are of the natural size; the sharper and more prominent inferior ridge suggests the specific distinction above indicated.

From the Wealden of Cuckfield.



Goniopholis carinatus.

PLATE 19.

CROCODILIA.[1]—*Poikilopleuron Bucklandi.*

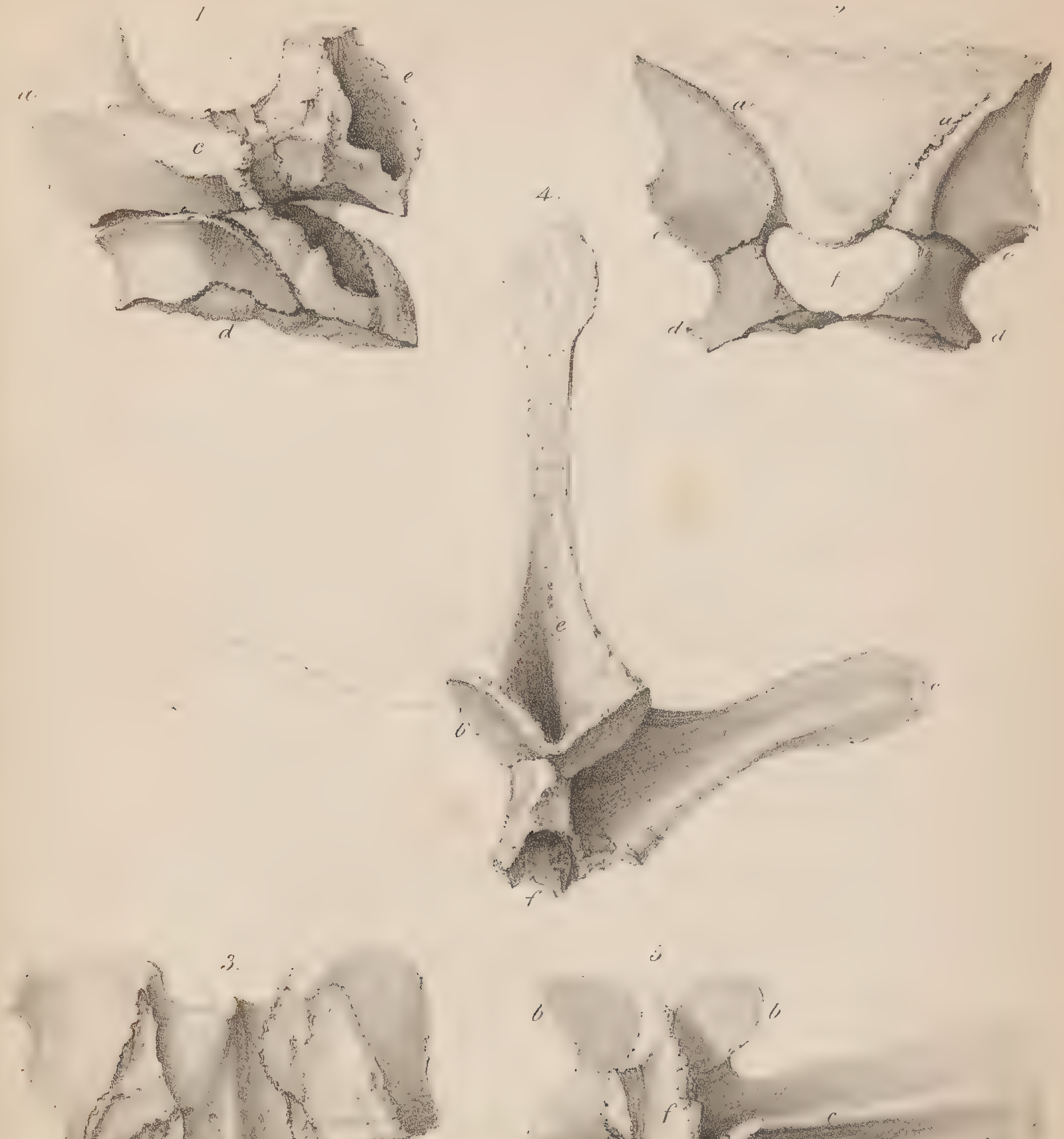
FIG.

1. Side view of a portion of neural arch of vertebra.
2. Front view of the same fossil.
3. Upper view of the same fossil.
4. Back view of diapophysis (*c*) and neural spine.
5. Under view of the same vertebral fragment.

The figures are two thirds natural size.

From the Weald of Sussex.

[1] Probably a Dinosaur.



Poikilopleuron

C. Burton, litho

PLATE 20.

CROCODILIA.—*Streptospondylus Cuvieri.*

FIG.

1. Side view of dorsal vertebra.
2. Hind view of do.

This is a type-vertebra of the "opisthocœlian" Crocodiles.

From the Lias of Whitby.

Streptospondylus Cuvieri.

J. ERXLEBEN.

PLATE 21.

Crocodilia.—*Streptospondylus major.*

Fig.

1. Side view of anterior dorsal vertebra; *a*, fore end; *b*, hind end.
2. Side view of anterior portion of a hinder dorsal vertebra; *a*, fore end.
3. Side view of summit of neural spine of do.
4. Back view of do.
5. Top view of summit of do.
6. Top view of centrum of hind dorsal vertebra.

From the Wealden of Sussex.

⅔

J. Erxleben fecit. Day & Haghe Lithrs to the Queen

Streptospondylus.

PLATE 23.

Crocodilia.[1]

Fig.

1. Anterior articular surface of mutilated dorsal vertebra.
2. Posterior articular surface of the same vertebra.
3. Side view of the same vertebra.
4. Anterior surface of entire caudal vertebra.
5. Posterior surface of the same vertebra.
6. Side view of three consecutive caudal vertebræ.

All the vertebræ are of the *Cetiosaurus brevis*, and are figured one fourth the natural size.

[1] Subsequently shown to belong to the Dinosaurian order.

J. Erxleben lith.

1/4

Cetiosaurus.

PLATE 24.

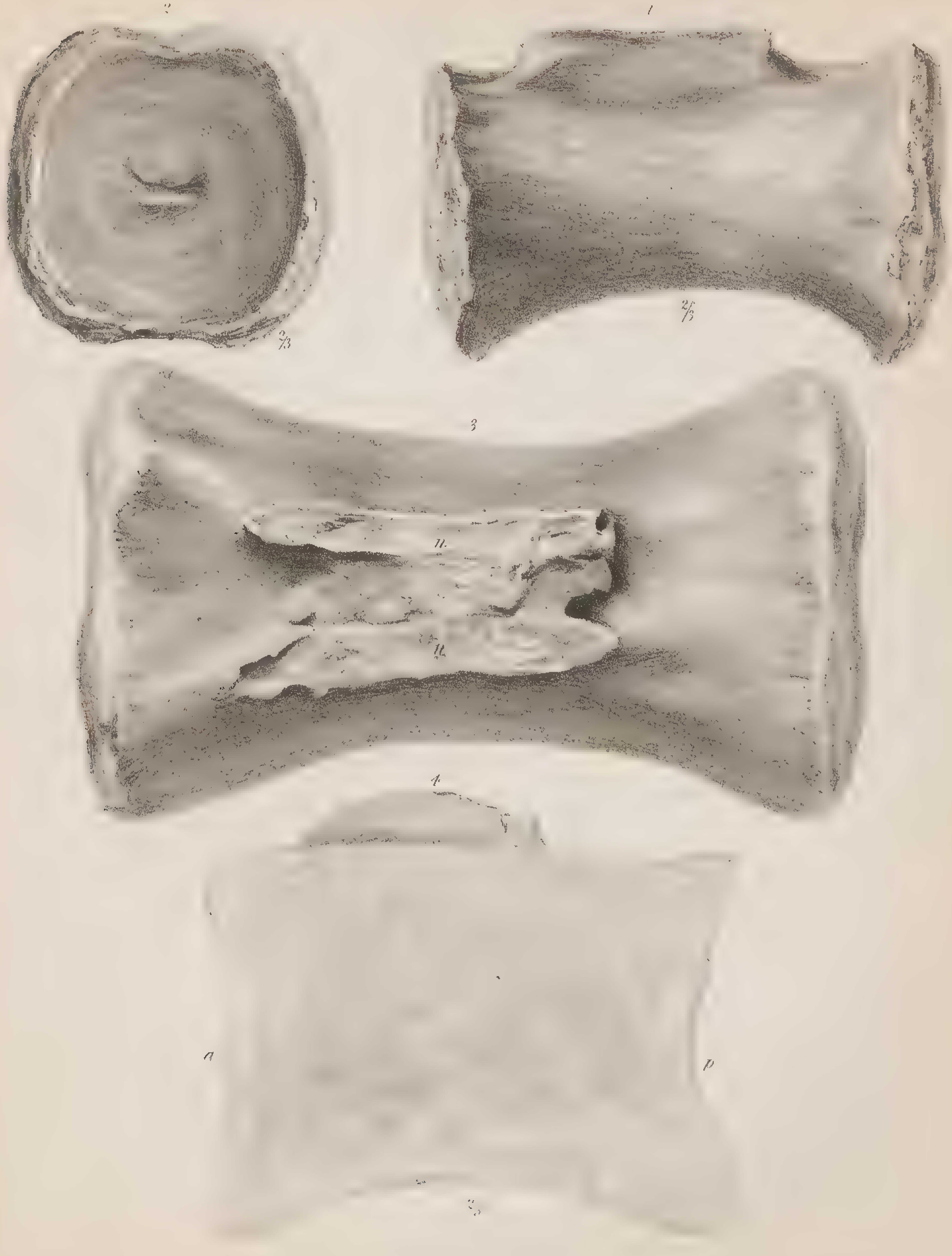
Crocodilia.[1]

FIG.

1. Caudal vertebra, side view, *Cetiosaurus longus*.
2. Terminal articular surface of do.
3. Upper surface of do.
4. Vertical longitudinal section of a dorsal vertebra of do.

Fig. 3 is of the natural size; the rest are reduced to two thirds the natural size.

[1] Subsequently shown to belong to the Dinosaurian order.



Cetiosaurus.

Crocodilia.

PLATE 26.

Fig.

1—7. Teeth of *Polyptychodon interruptus,* nat. size.

From the Lower Chalk, near Lewes, Sussex. In the Museum of Mr. Potter, of Lewes.

8. Tooth of *Polyptychodon continuus* (?), nat. size.

From the Lower Chalk of Sussex. In the Museum of Henry Catt, Esq., of Brighton.

Polyptychodon.

From Nature on Stone by J. Erxleben Day & Son. lith.rs to the Queen

Crocodilia.

PLATE 27.

Polyptychodon continuus (?).

Fig.

1. Lower end of shaft of femur, (scale of 2 inches to 1 foot.)
2. Lower end of shaft of humerus, (scale of 2 inches to 1 foot.)
3. A larger portion of the shaft of a long bone, (scale of 2 inches to 1 foot.)
4. A fragment of a long bone, near the proximal end of humerus?
5. Portions of the pubis, P, and ischium, I, (scale of 2 inches to 1 foot.)
6. Fractured portion of the ilium, (scale of 4 inches to a foot.)

From the Green-sand, near Hythe. Discovered and presented by H. Mackeson, Esq., of Hythe, Kent, to the British Museum.

J. Erxleben. del. et lith.

n lith^rs to the Queen

Polyptychodon (?)

Crocodilia.

PLATE 28.

Polyptychodon continuus (?).

Fig.

1. A block of Green-sand stone, containing the shaft of a tibia, T, and the lower end of that of a fibula, F, (scale of 2 inches to a foot.)

2. A block of Green-sand stone, containing the shaft of the humerus, H, and that of the ulna, U, (same scale.)

3. A portion of the matrix, with impressions of the shafts of two metacarpal or metatarsal bones (same scale.)

4 and 5. Fragments of long bones (same scale.)

From the Green-sand, near Hythe, Kent. Discovered and presented by H. Mackeson, Esq., to the British Museum.

J. Erxleben del. et lith. Day & Son, lith^rs to the Queen

Polyptychodon (?)

Crocodilia.

PLATE 29.

Fig.

1 and 2. Crown of the tooth of *Polyptychodon interruptus.*

3. Outline of the base of the same tooth.

From the Chalk of Sussex.

4. Crown of the tooth of *Polyptychodon continuus.*

From the Chalk of Kent. In the Collection of H. W. Taylor, Esq., of Brixton Hill.

5. Crown of the tooth of *Polyptychodon continuus.*

6. Longitudinal section of the same tooth.

From the Kentish Rag, Green-sand Formation, near Maidstone. In the Collection of J. Bensted, Esq.

All the figures are of the natural size.

Polyptychodon_1.2. interruptus_4.5.6. continuus.

From Nature on Stone by Erxleben

Day & Son Lith

Crocodilia.

PLATE 30.

A slab of Green-sand, with portions of the skeleton of a young Crocodile.

From near Hastings. In the Collection of W. D. Saull, Esq., F.G.S.

Figs. 1 and 2. Portions of the jaws of the same Crocodile, nat. size.

From Nature on Stone by J. Erxleben

Day & Son Lithrs to The Queen

Crocodilia.

PLATE 31.

Streptospondylus major.

Fig.

1. }
2. } Cervical vertebra, half natural size.

3. }
4. } Posterior caudal vertebra (*Pelorosaurus* ?), one fourth natural size.

From the Wealden of the Isle of Wight. British Museum.

Jos Dinkel lith W West imp.

Streptospondylus

Crocodilia.

PLATE 32.

Streptospondylus major.

Fig.

1. Upper view of cervical vertebra, half natural size.
2. Under view } of cervical vertebra, one sixth natural size.
3. Front view } of cervical vertebra, one sixth natural size.
4. Two anterior cervical vertebræ of a young Iguanodon, half natural size.
5. Side view of dorsal vertebra of *Streptospondylus major*, one sixth natural size.

From the Wealden of the Isle of Wight. British Museum.

Jos Dinkel lith. W. West imp

Streptospondylus.

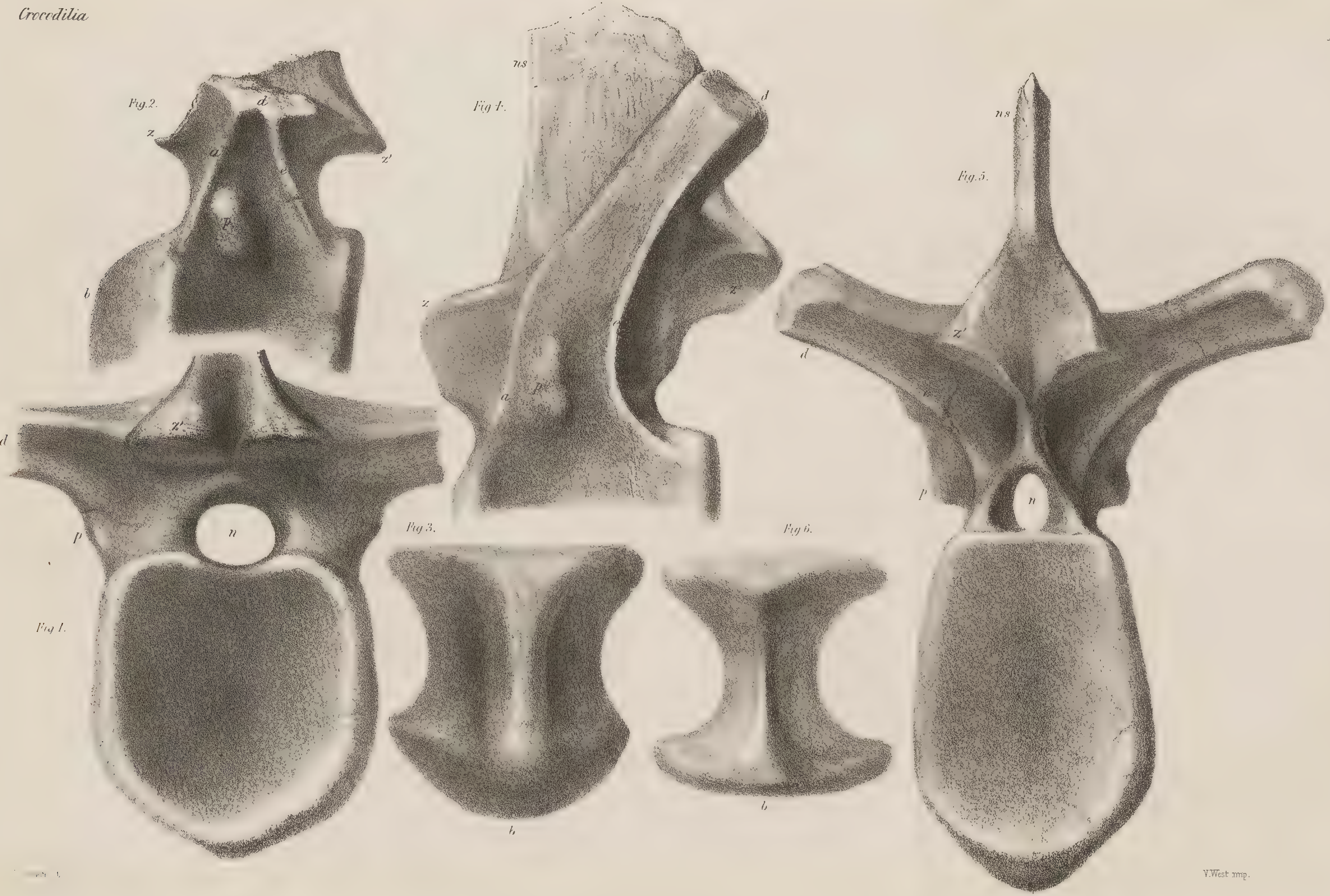
Crocodilia.

PLATE 33.

Dorsal Vertebræ of *Streptospondylus*, figs. 1, 2, 3 ; and *Iguanodon*, figs. 3, 4, 5 ; half natural size.

Fig.
1. Back view of centrum and base of neural arch.
2. Side view of base of neural arch.
3. Under view of centrum.
4. Back view of corresponding vertebra of Iguanodon.
5. Side view of base of neural arch.
6. Under view of centrum.

From the Wealden of the Isle of Wight. British Museum.



V. West imp.

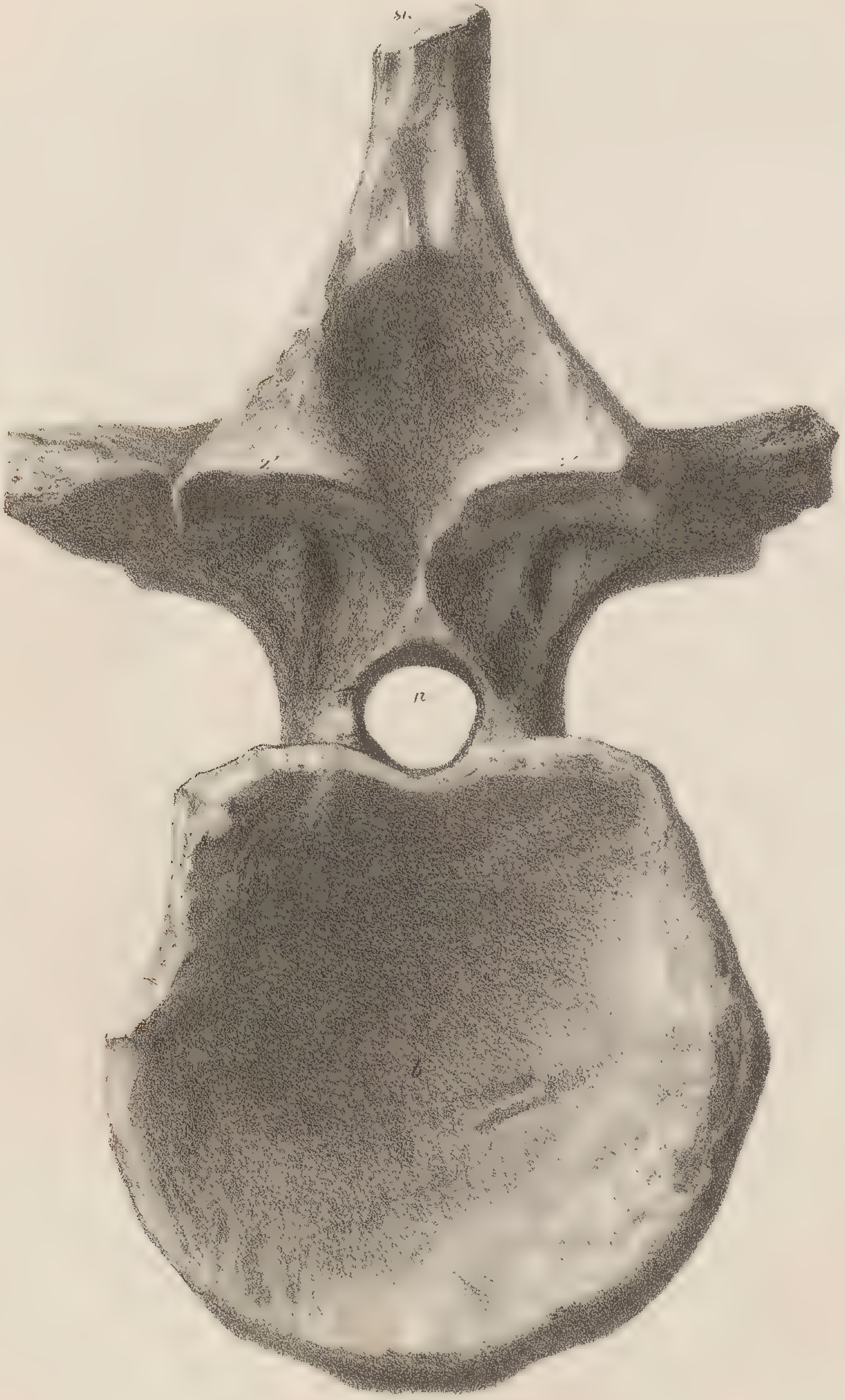
Crocodilia.

PLATE 34.

CETIOSAURUS BREVIS.

Posterior view of a dorsal vertebra, half natural size.

From the Wealden of the Isle of Wight. British Museum.



Jos Dinkel lith

Cetiosaurus.

W. West imp

Crocodilia.

PLATE 35.

CETIOSAURUS BREVIS.

Fig.

1. Side view of a dorsal vertebra, half natural size.
2. Vertical longitudinal section of a dorsal vertebra, half natural size.

From the Wealden of the Isle of Wight. British Museum.

Fig. 1.

Fig. 2

Cetiosaurus.

Crocodilia.

PLATE 36.

CETIOSAURUS BREVIS.

Posterior view of a caudal vertebra, natural size.

From the Wealden of Sussex. British Museum.

Nat. size

Cetiosaurus

Crocodilia.

PLATE 37.

Pelorosaurus Conybearii.

Posterior view of a caudal vertebra, natural size. The line below gives the antero-posterior dimension.

From the Wealden of Tilgate Forest. British Museum.

Jos Dinkel lith

Pelorosaurus

W West Imp

Crocodilia.

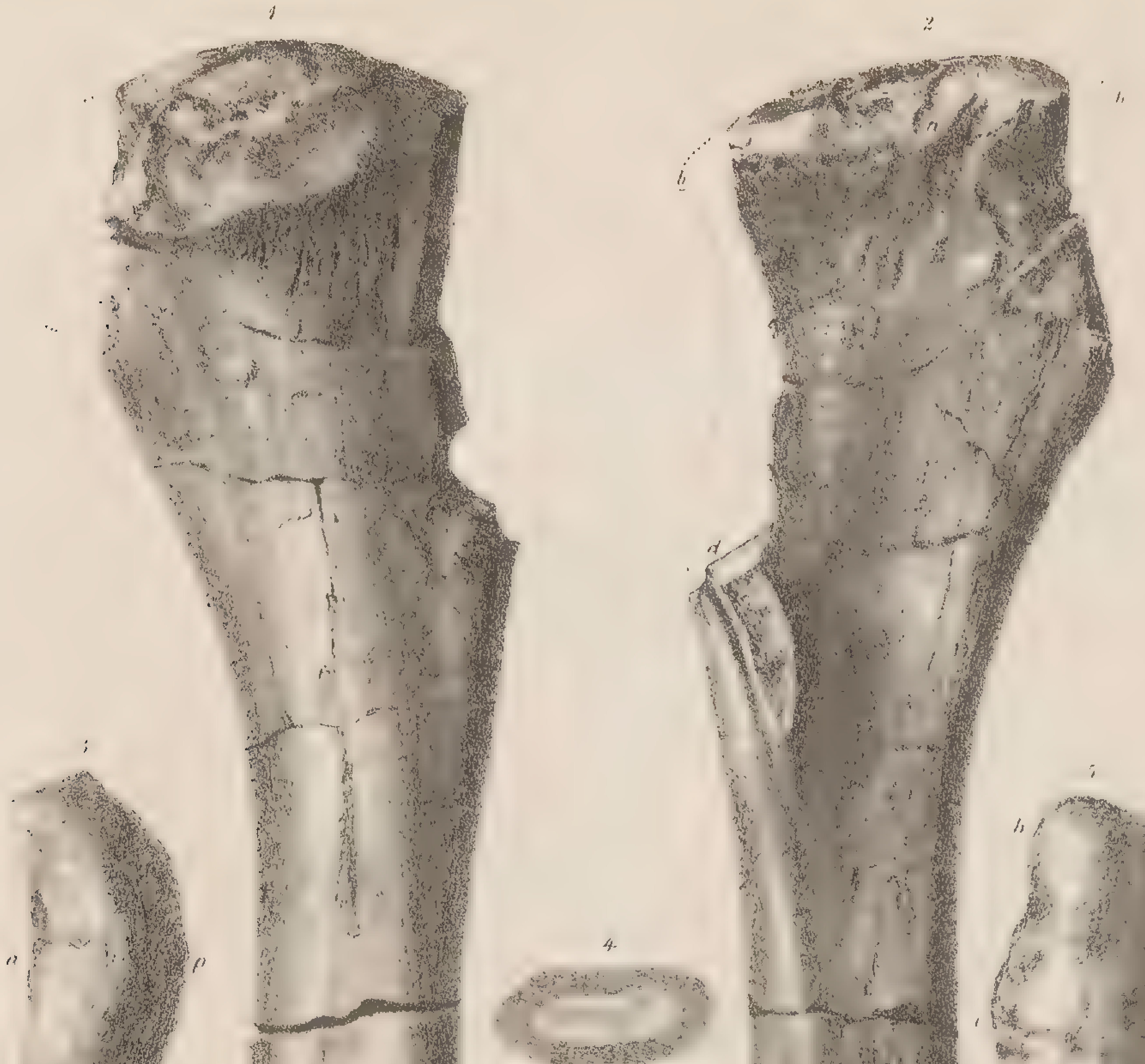
PLATE 38.

Right Humerus of *Pelorosaurus Conybearii*, one sixth natural size.

Fig.

1. Back view.
2. Front view.
3. Proximal end.
4. Section of middle of shaft, showing the medullary cavity.
5. Distal end.

From the Wealden of Tilgate Forest. British Museum.



Jos Dinkel lith W West imp.

Pelorosaurus

Crocodilia.

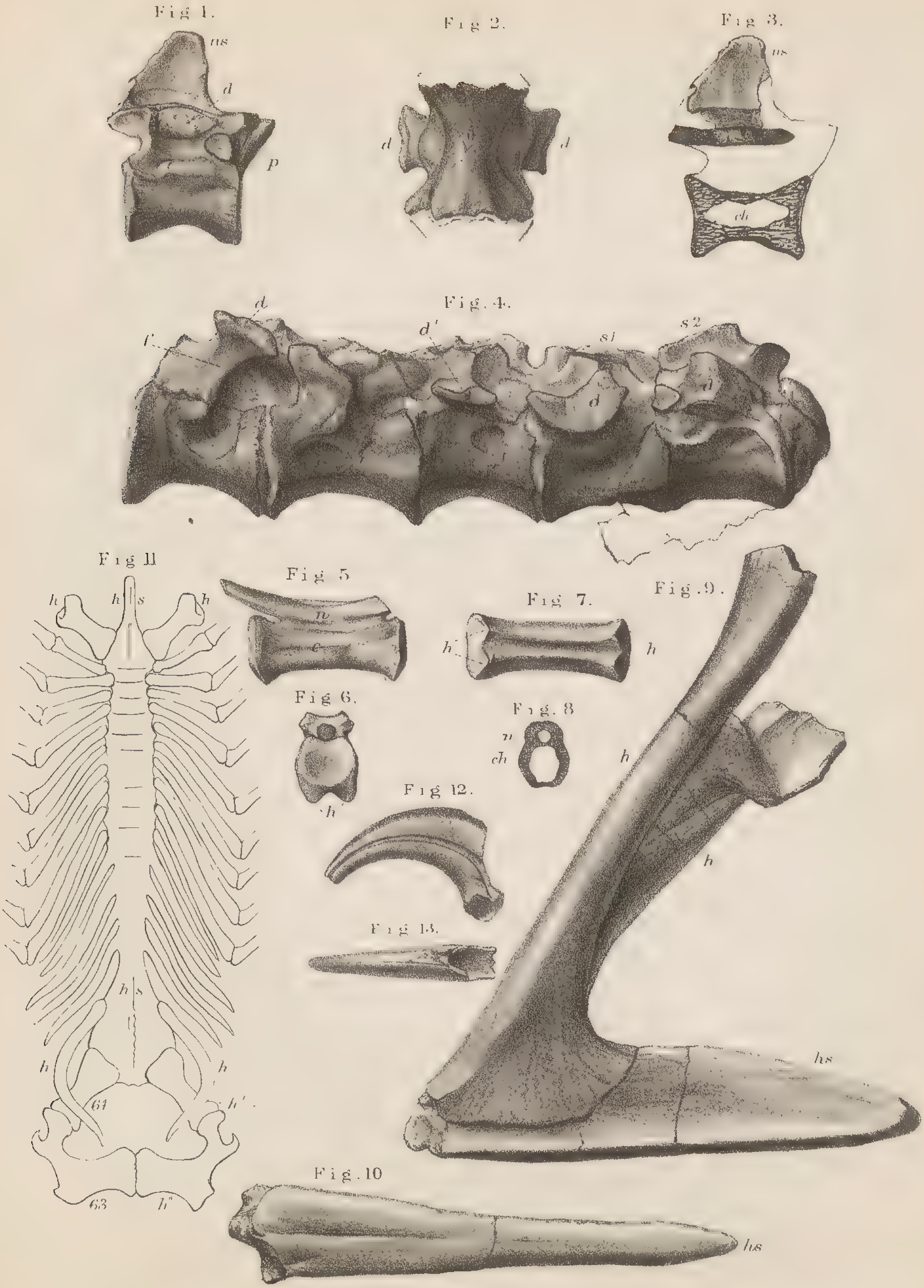
PLATE 39.

Poikilopleuron pusillus.

Fig.

1. Side view of a dorsal vertebra.
2. Under view of a dorsal vertebra.
3. Vertical longitudinal section of the same.
4. Side view of lumbar and sacral vertebræ.
5. Side view of a caudal vertebra.
6. End view of the same.
7. Under view of the same.
8. Vertical transverse section of the middle of the same.
9. Abdominal hæmapophysis and hæmal spine.
10. Under surface of abdominal hæmal spine.
11. Reduced view, in outline, of neural or upper surface of the series of abdominal hæmapophyses and spines of a *Crocodilus biporcatus*.
12. Side view of ungual phalanx.
13. Upper view of the same.

The fossils are of the natural size, are from the Wealden of the Isle of Wight, and are in the Museum of the Rev. W. Fox, M.A., F.G.S.



C. L. Griesbach del et lith

Poikilopleuron pusillus.

Mintern Bros imp

Crocodilia.

PLATE 40.

Goniopholis simus.

Fig.

1. Upper surface of skull.
2. Portion of the palatal surface of skull.
3. Portion of the left alveolar border and teeth of upper jaw.
4. The largest (2nd canine) of the upper series of teeth.

From the Limestone Series of the Middle Purbeck.

Figs. 1—3: half nat. size; Fig. 4: nat. size.

From nat. on Stone by J. Erxleben W West & C° imp

Goniopholis simus.

Crocodilia.

PLATE 41.

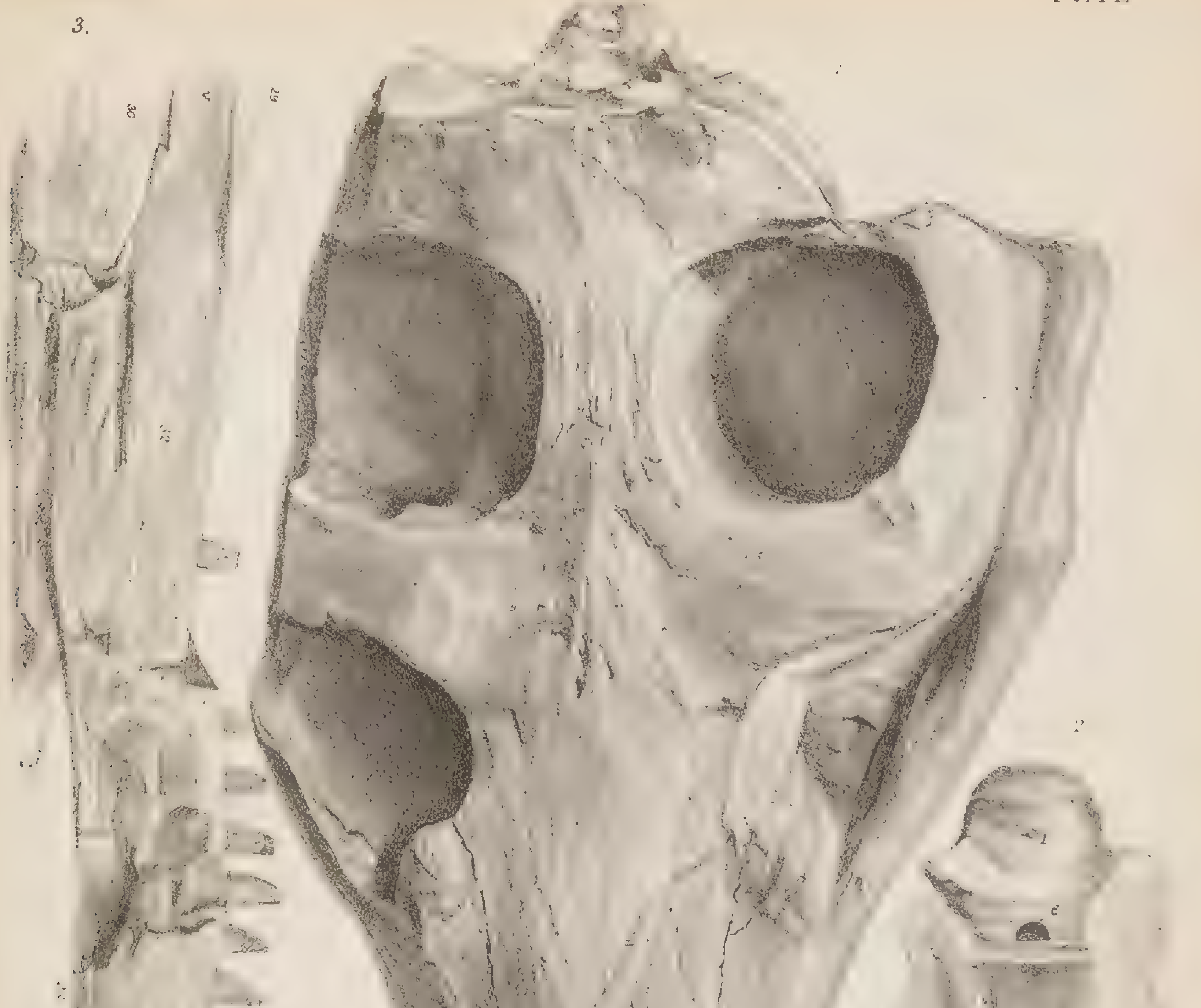
Petrosuchus levidens.

Fig.

1. Portion of skull, upper surface.
2. Portion of skull, palatal surface.
3. Portion of right ramus of mandible.

From the Limestone Series of the Middle Purbeck.

All the figures are of the nat. size.



From nat. on Stone by J. Erxleben

W. West & Co imp

Petrosuchus levidens.

Crocodilia.

PLATE 42.

Genus—Goniopholis.

Fig.

1. Dentary portions of the mandible of *Goniopholis tenuidens:* 1 *a'*, outer side of anterior canine; 1 *b*, inner side of anterior canine: *b'*, the same magnified.

Genus—Brachydectes.

2. Side view of left mandibular ramus of *Brachydectes major.*
3. Side view of left mandibular ramus of *Brachydectes minor.*

Order—Crocodilia.

4. Front view of an anterior trunk-vertebra.
5. Upper (neural) view of a posterior trunk-vertebra.
6. Upper (neural) view of a following vertebra.
7. Side view of a trunk-vertebra.
8. Side view of a trunk-vertebra.
9. Back view of a sacral vertebra.
10. Side view of a caudal vertebra.
11. Front view of hæmal arch and spine of do.
12. Longitudinal vertical section of the centrum of a trunk-vertebra.
13. Side view of three dorsal vertebræ of *Brachydectes minor*?

The figures are of the natural size save where otherwise expressed.
From the Middle Purbeck; in the British Museum.

H. Oliver del W West & Co. imp

Crocodilia.

PLATE 43.

Genus—Nannosuchus

Fig.

1. Dentary portions of mandible of *Nannosuchus gracilidens.*
2. Outer side of right anterior canine of do., magn.
3. Oblique view of a trunk-vertebra of do.
4. Portion of a dorsal scute of do.
5. Portion of a larger dorsal scute of do. (the subjects of figs. 3, 4, and 5, are on the same slab as fig. 1).
6. Under view of dentary portions of mandible of *Nannosuchus gracilidens.*
7. Detached anterior canine of probably the same mandible.
8. Outer side view of right ramus of mandible of *Nannosuchus gracilidens* (the ends are drawn too far apart).
9. Portions of dentary elements of mandible of do.
10. Humerus of do.

Incertæ species.

11. Outer view of three pairs of dorsal scutes (probably of *Nannosuchus*).
12. Inner view of four pairs of dorsal scutes (probably of *Theriosuchus*).

Lacertilia.

Genus—Nuthetes.

13 and 14. Portions of mandible and teeth of *Nuthetes destructor.*

15. Five detached teeth of do.

16. Side view of crown of a tooth of do., magn.

17—21. Dermal bones or 'granicones,' probably of *Nuthetes.*

22. Section of a granicone, magnified 12 diameters.

23. Ib. ib. magnified 500 diameters.

Genus—Theriosuchus.

24. Anterior caudal vertebra, with articular end in outline.

The figures are of the natural size save where otherwise expressed.
From the Middle Purbeck; in the British Museum.

H. Olsen del.

W. West & Co. imp.

Crocodilia.

PLATE 44.

Genus—Nannosuchus.

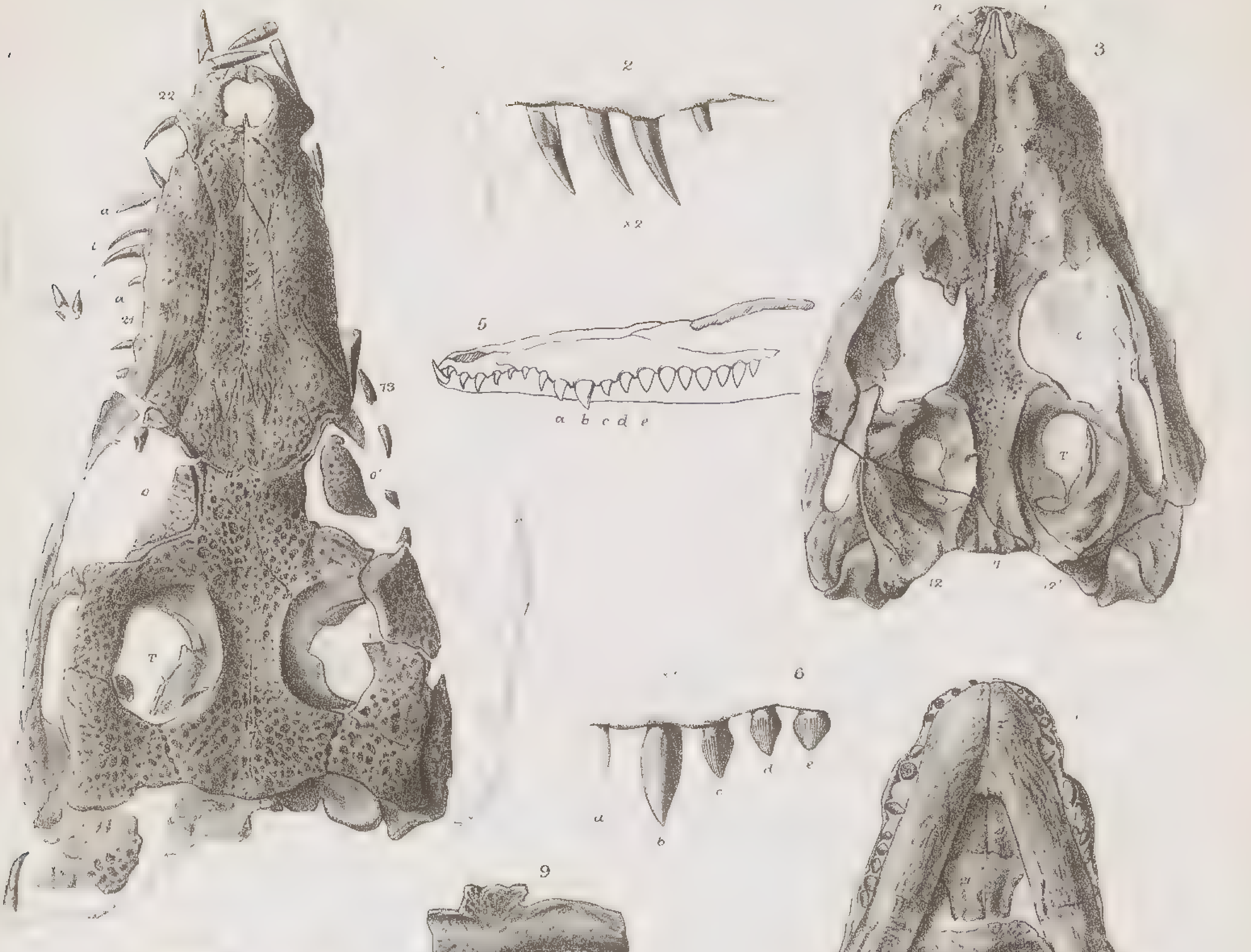
Fig.

1. Upper view of skull of *Nannosuchus gracilidens.*
2. Crowns of four teeth, *a*, *b*, *c*, *d*, in fig. 1, magnified 2 diameters.

Genus—Theriosuchus.

3. Upper view of skull of *Theriosuchus pusillus.*
4. Under view of the same skull.
5. Side view of facial part of the same skull.
6. Crowns of five teeth, *a*, *b*, *c*, *d*, *e*, in fig. 5, magnified 3 diameters.
7. Upper view of cranium and inner view of left maxillary, *Theriosuchus pusillus.*
8. Frontal bone, *Theriosuchus pusillus.*
9. Part of left maxillary, ib.
10. Part of right maxillary, ib.
11. Left maxillary, inner side view, ib.
12. Right maxillary, young individual, ib.
13. Right maxillary, young individual, ib.
14. Left dentary, side view, mature individual.
15. Dentary and angular parts of mandible, under view, ib.
16. Dentary and fragments of mandible, inner side view, ib.
17. Fore part of right dentary, side view, ib.
18. Portion of left dentary, ib.

The figures are of the natural size save where otherwise expressed.
From the Middle Purbeck; in the British Museum.



C.L. Griesbach lith. W West & Co imp.

1-2. Nannosuchus, 3-16. Theriosuchus

Crocodilia.

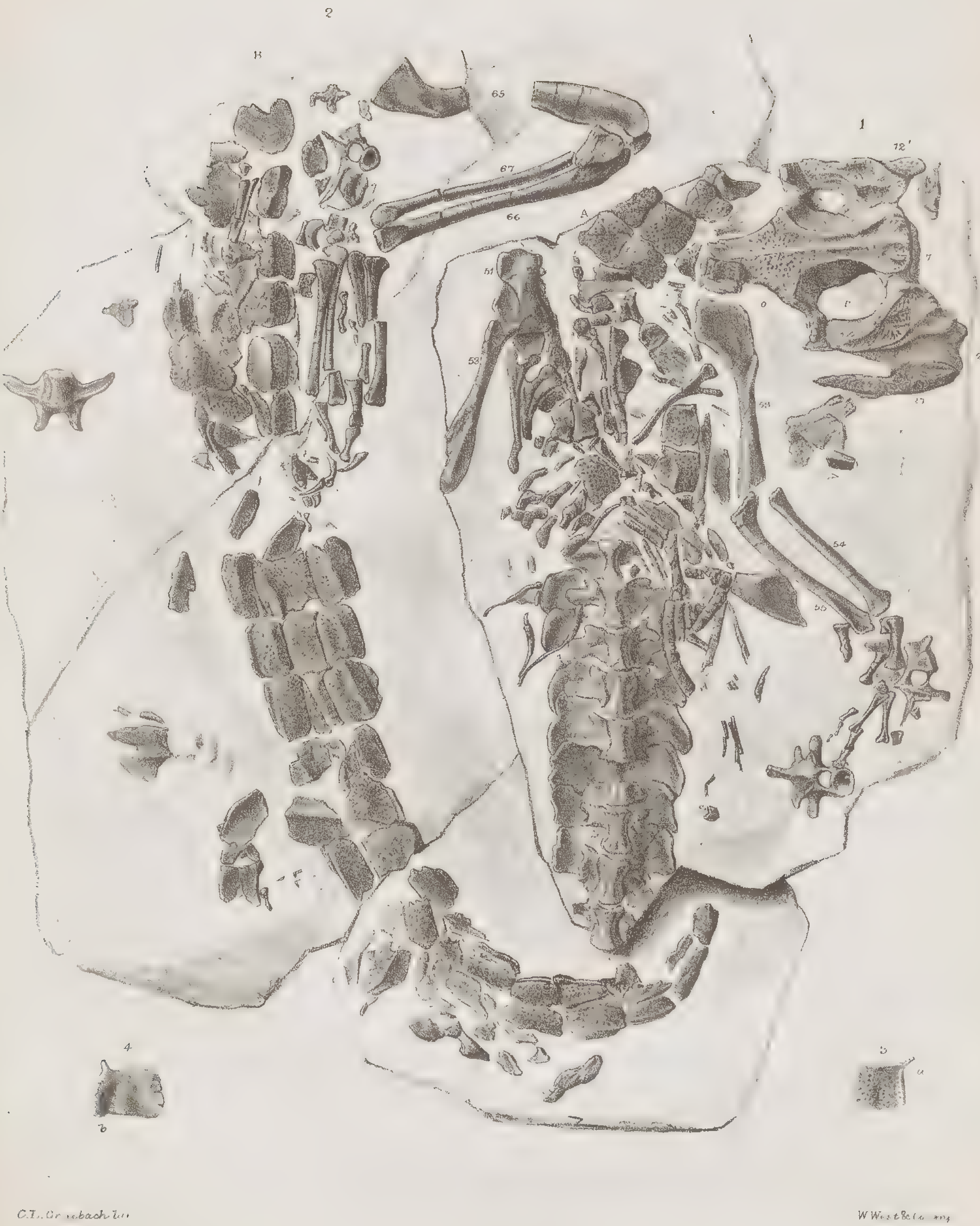
PLATE 45.

Theriosuchus pusillus.

Fig.

1. Portion of skull, trunk-vertebræ, and bones of fore limbs.
2. Bones of right hind limb and ridged caudal scutes of the same skeleton.
3. An unridged scute with peg, *a*.
4. Under surface of a scute, showing peg and groove, *b*.

All the figures are of the natural size.
From the Middle Purbeck ; in the British Museum.



C. L. Griesbach lith. W. West & Co. imp.

Theriosuchus

Dinosauria.

PLATE 1.

Iguanodon Mantelli, scale of 2 inches to a foot.

A considerable portion of the skeleton in a block of the Kentish Rag variety of the Green-sand Stone Formation.

Discovered by Mr. Bensted, of Maidstone. In the Collection of the British Museum.

J. Dinkel del et lith

Day & Son, Lith.rs to The Queen

Iguanodon.

Dinosauria.

PLATE 2.

Outline of the same specimen, with the names inscribed on the best preserved bones: in the vertebræ, *d*, is "dorsal," and *c*, "caudal."

Dinkle del et lith

Day & Son, Lith^rs to The Queen

Iguanodon.

Dinosauria.

PLATE 3.

Iguanodon Mantelli, nat. size.

Side view of a dorsal vertebra.

p. Parapophysis, or lower transverse process, with the surface for the head of the rib.

d. Fractured base of diapophysis or upper transverse process.

n, n'. Base of neurapophysis.

n, n''.* Neural platform.

z'. Posterior zygapophysis.

ns. Neural spine.

From the Kentish Rag. In the Collection of the British Museum.

J. Dinkel del. et lith. Iguanodon. Day & Son Lith^rs

Dinosauria.

PLATE 4.

Iguanodon Mantelli, nat. size.

Front view of a dorsal vertebra.

n, n. Base of neurapophysis.

z, z. Anterior zygapophyses.

d. Base of diapophysis.

From the Kentish Rag. In the Collection of the British Museum.

J. Dinkel, del. et lith.

Day & Son. Lith^rs to The Queen

Iguanodon.

Dinosauria.

PLATE 5.

Iguanodon Mantelli, nat. size.

Fig.

1. Front view of a caudal vertebra.
2. Side view of ditto.
3. Under view of ditto.
4. Under view of another caudal vertebra.

From the Kentish Rag, near Maidstone. In the Collection of the British Museum.

Iguanodon.

Dinosauria.

PLATE 6.

Chief part of the vertebral column, with some bones of the extremities, of a young *Iguanodon*; nat. size.

From the Wealden of Cowleaze Chine, Isle of Wight. In the British Museum, and that of J. S. Bowerbank, Esq., F.R.S.

Iguanodon.

Ford & West. Imp.

Dinosauria.

PLATE 7.

Iguanodon Mantelli ; one fourth nat. size.

Fig.

1. Upper or vertebral portion of a thoracic rib, front view.
2. Back view of the same rib.
3. Upper view of the vertebral end of a thoracic rib, showing the ridge continued upon the long neck.
4. A considerable portion of a succeeding thoracic rib.
5. Upper view of the vertebral end of the same rib.
6. A considerable portion of a succeeding thoracic rib.
7. Upper view of the vertebral end of the same rib.
8. An almost entire rib from about the middle of the thorax.
9. An anterior thoracic rib.
10. Upper view of the vertebral end of the same rib.

From the Wealden of Tilgate forest. In the British Museum.

Jos. Dinkel lith. Ford & West imp.

Iguanodon.

Dinosauria.

PLATE 8.

The inferior or ventral surface of the sacrum, and some anchylosed bones of the *Iguanodon*; half nat. size.

From the Wealden, near Brook-point, Isle of Wight. In the Museum of W. D. Saull, Esq., F.G.S.

Dinkel Lith.

Iguanodon

Dinosauria.

PLATE 9.

The superior or dorsal surface of the sacrum, and some anchylosed bones of the *Iguanodon;* half nat. size.

From the Wealden, near Brook-point, Isle of Wight. In the Museum of W. D. Saull, Esq., F.G.S.

Jos Dinkel, Lith Ford & West, Imp

Iguanodon.

Dinosauria.

PLATE 10.

Fig.

1. Right side of the sacrum, and anchylosed ilium of the *Iguanodon*; half nat. size.
2. Left side of the sacrum, and anchylosed lumbar vertebra of the same *Iguanodon*.

From the Wealden, near Brook-point, Isle of Wight. In the Museum of W. D. Saull, Esq., F.G.S.

Jos Dinkel Lith

Iguanodon.

Dinosauria.

PLATE 11.

Fig.

1. Front view of the last lumbar vertebra anchylosed to the sacrum of the *Iguanodon*, half nat. size.

2. Back view of the sacrum with the anchylosed right iliac bone of the *Iguanodon*.

From the Wealden, near Brook-point, Isle of Wight. In the Museum of W. D. Saull, Esq., F.G.S.

Fig 1

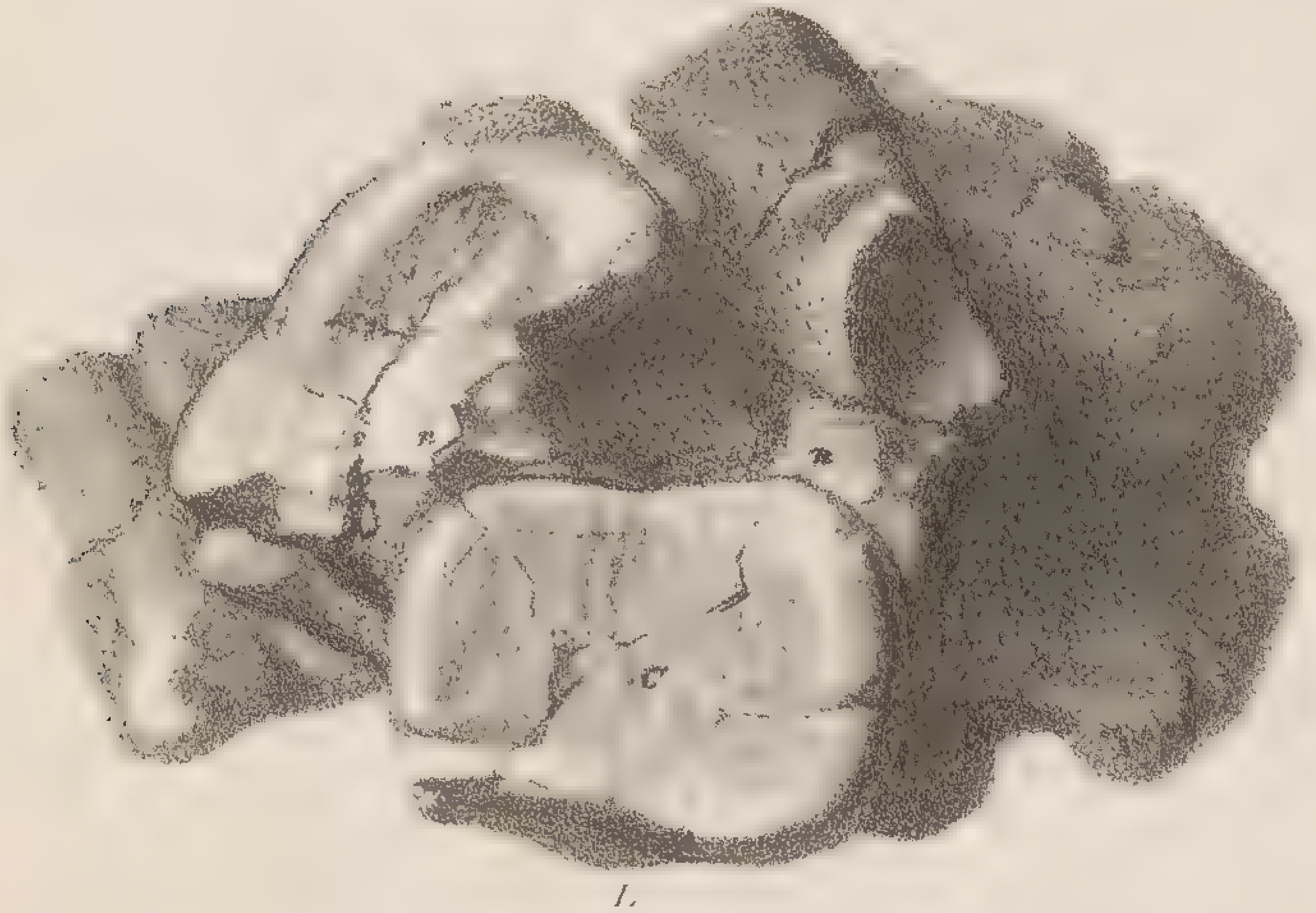
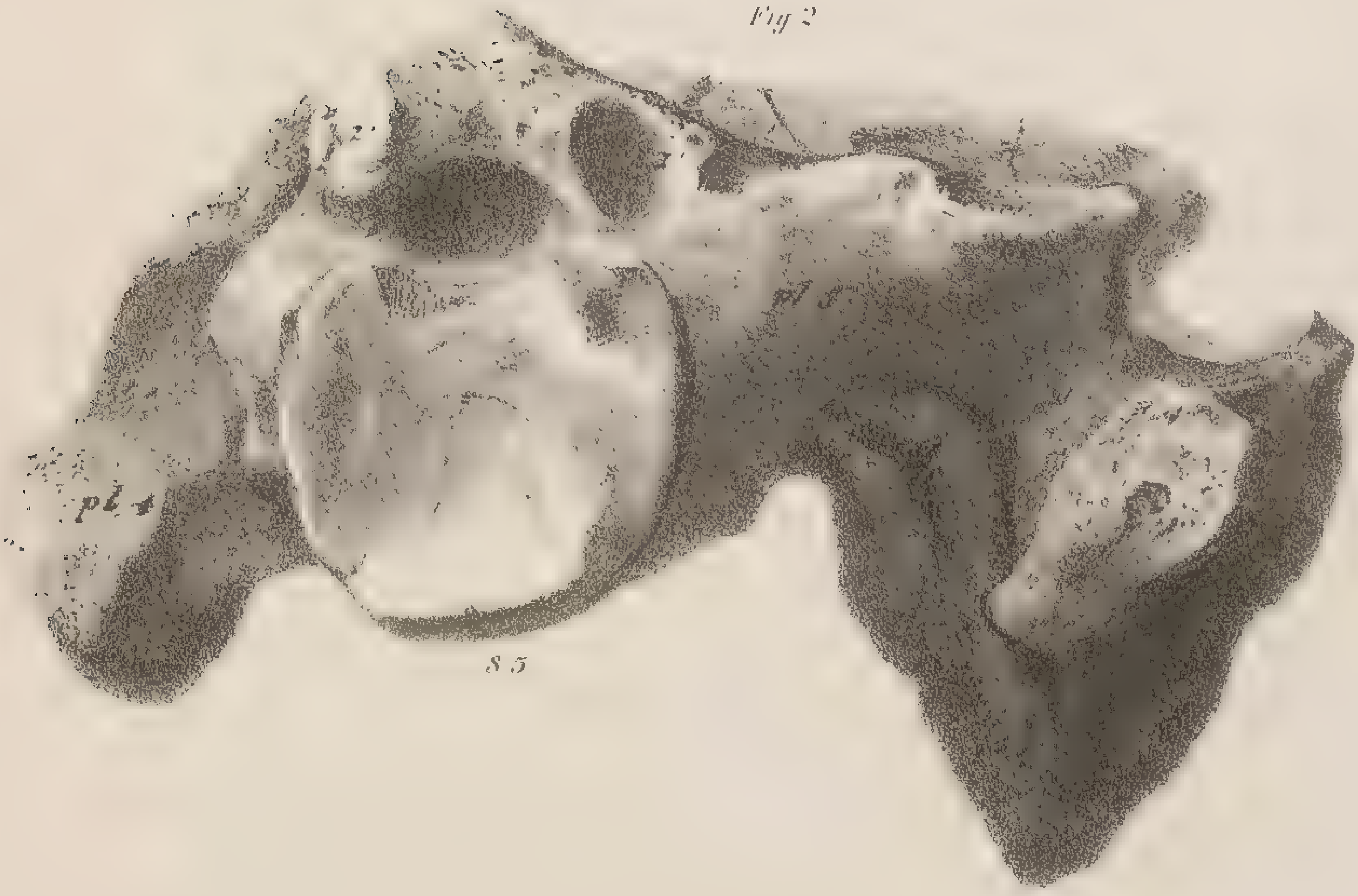


Fig 2



os Dinkel Lith

Ford & W.

Iguanodon.

Dinosauria.

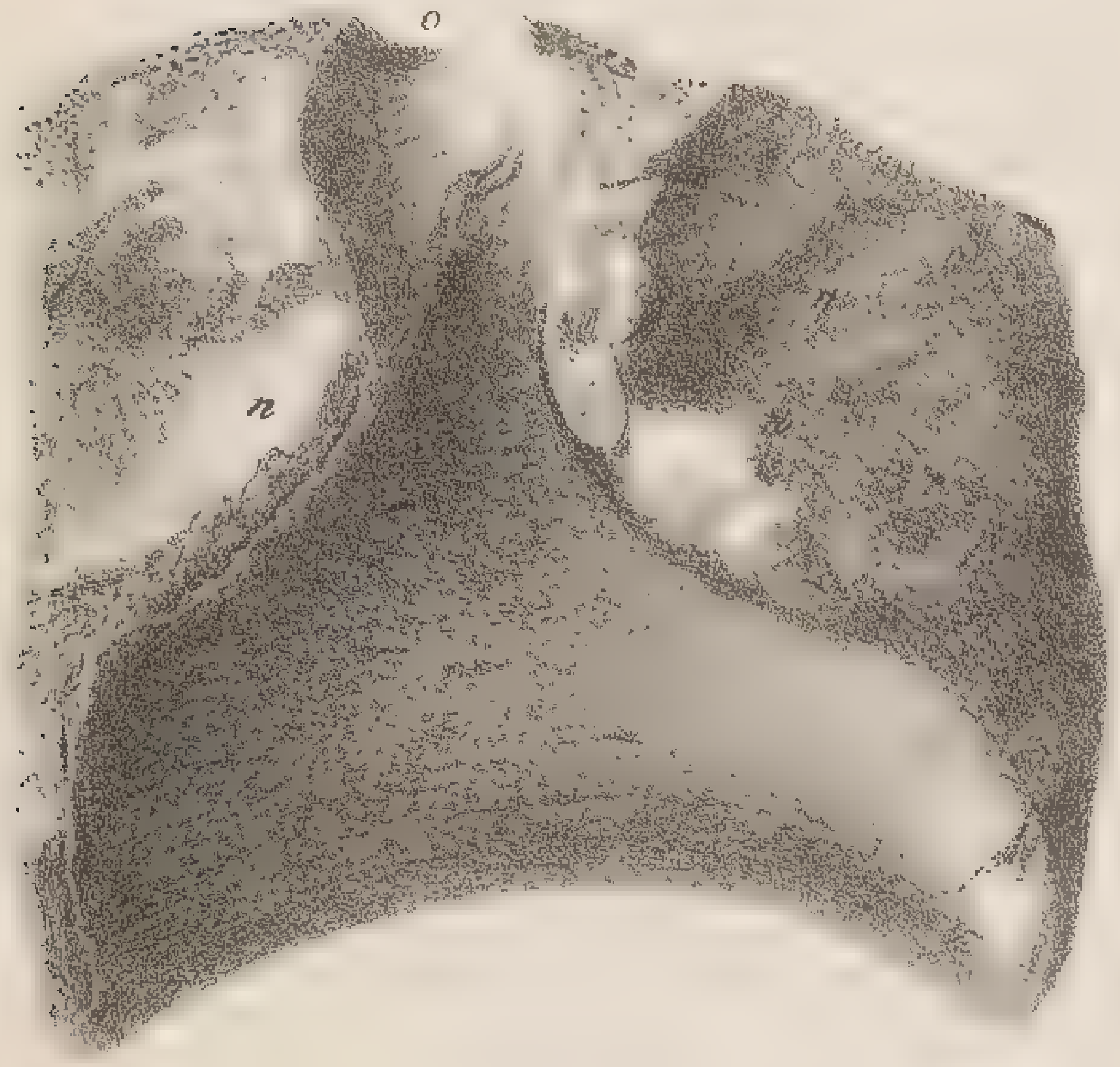
PLATE 12.

The body of the fourth sacral vertebra of a young *Iguanodon;* nat. size.

Fig.
1. Side view.
2. Front view.
3. Under view.
4. Upper view, showing the place of the escape of the sacral nerves at *o o*.

From the Wealden of Tilgate Forest, Sussex. In the British Museum.

1



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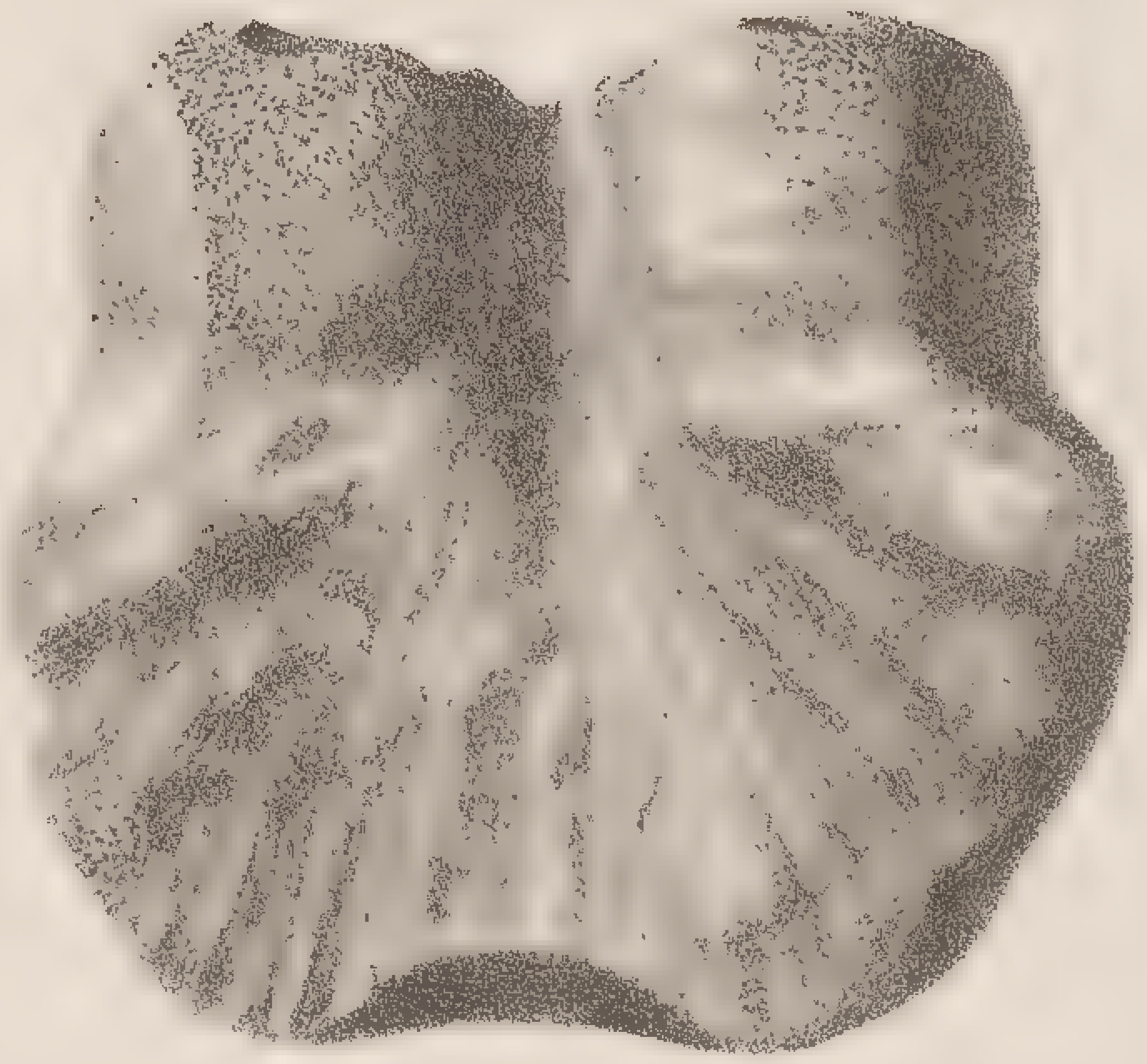
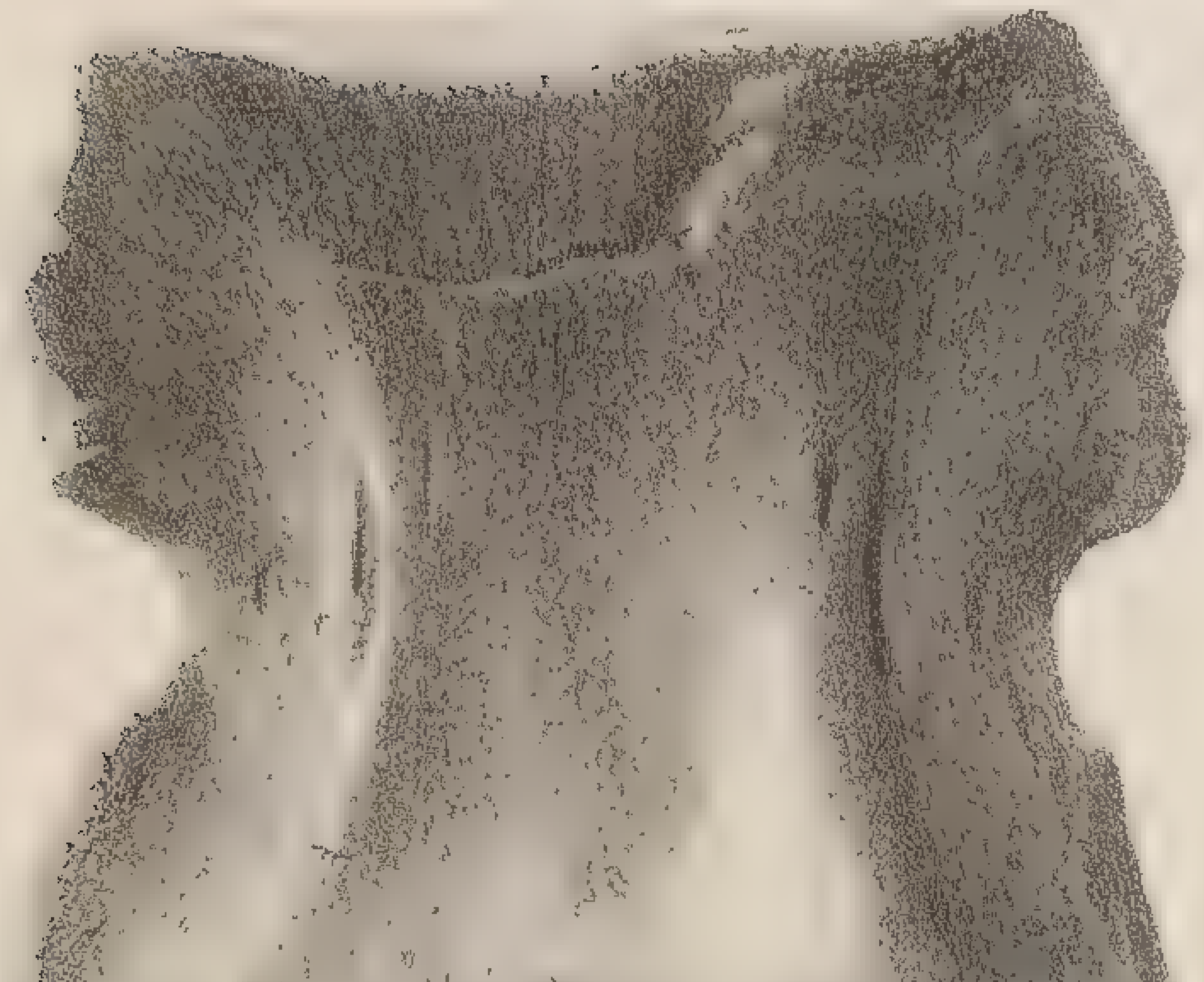


3



4

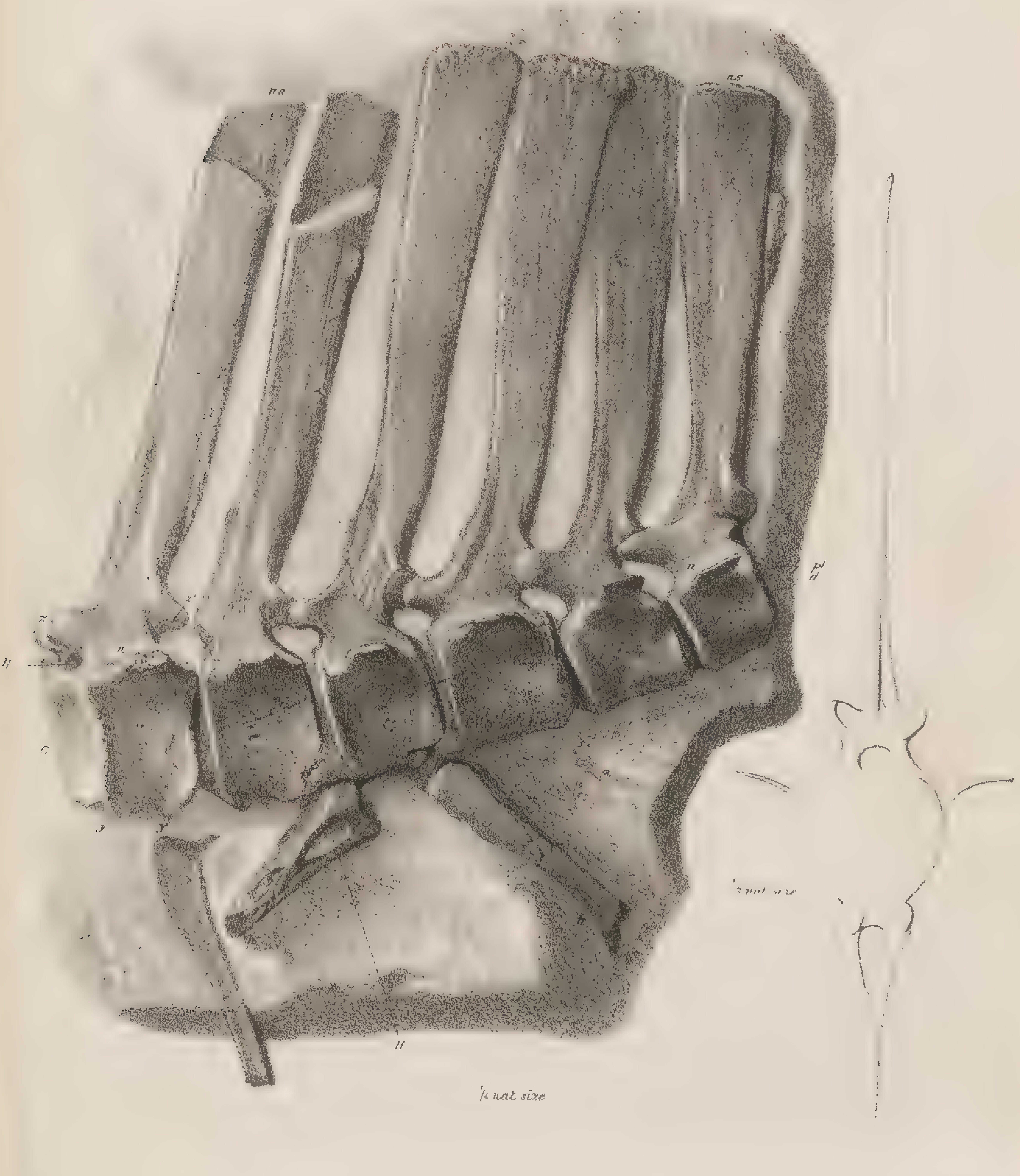
Iguanodon.

Dinosauria.

PLATE 13.

Six consecutive vertebræ from the fore part of the tail of the *Iguanodon Mantelli*; one third nat. size. An outline of a front view of the first of these vertebræ; restored and adjoined.

From the Wealden at Cuckfield, Sussex. In the British Museum.



Dinkel lith

imp

Iguanodon.

Dinosauria.

PLATE 14.

A vertebra probably behind the middle of the tail of the *Iguanodon;* two thirds nat. size ; the hæmal arch is wanting, and the neural spine is mutilated.

Fig.

1. Side view.
2. Upper view.
3. Front view.
4. Back view.
5. Under view.

From the Wealden at Stammerham, Sussex. In the Museum of J. B. Holmes, Esq.

2/3 nat size

Iguanodon.

Dinosauria.

PLATE 15.

The tympanic bone of an *Iguanodon?* nat. size.

From the Wealden of Tilgate forest, Sussex. In the British Museum.

Iguanodon.

Dinosauria.

PLATE 16.

The dentary part of the right branch of the lower jaw of a young *Iguanodon;* nat. size.

Fig.

1. Outside view.
2. Inside view, showing the alveolar depression, and the germs of some successional teeth.

From the Wealden of Stammerham, Sussex. In the Museum of J. B. Holmes, Esq., of Horsham.

Fig. 2.

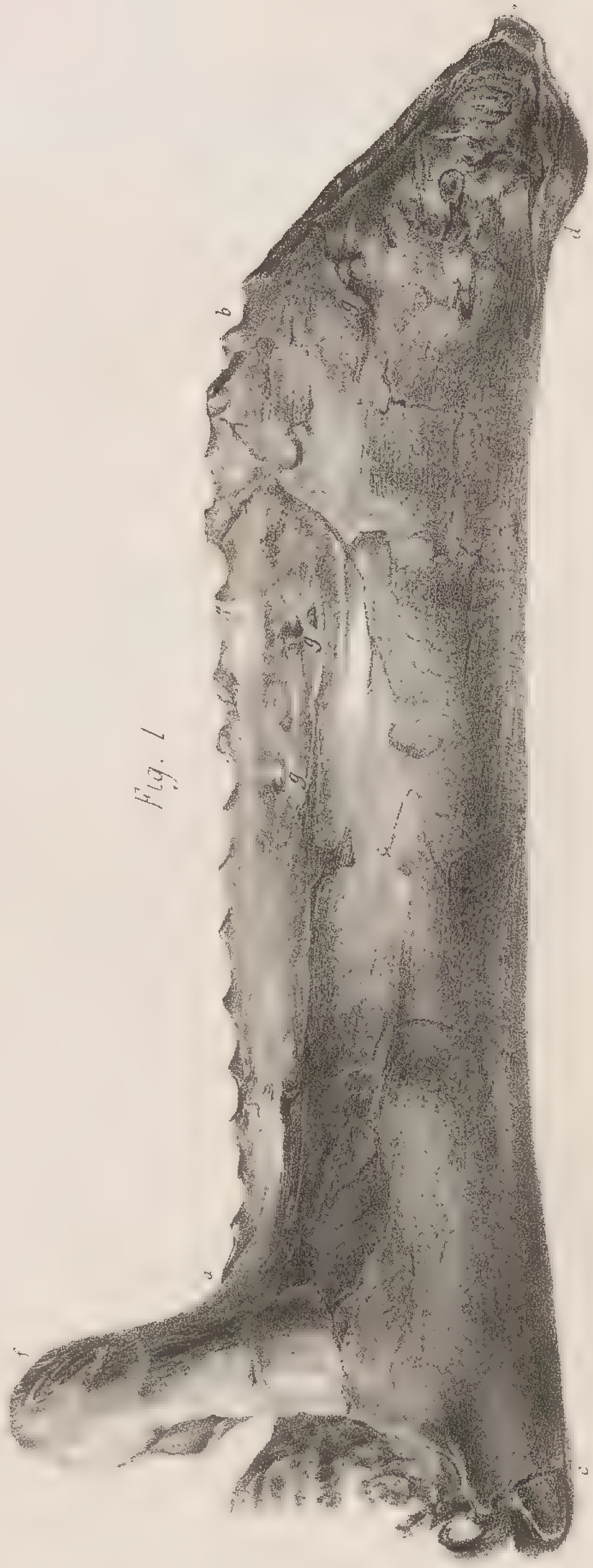


Fig. 1.

Iguanodon.

Dinosauria.

PLATE 17.

The same portion of lower jaw, as in Tab. XI, of a young *Iguanodon;* nat. size.

Fig.
3. Upper view.
4. Under view.

From the Wealden of Stammerham, Sussex. In the Museum of J. B. Holmes, Esq. of Horsham.

Fig 4
Fig 3

Dinosauria.

PLATE 18.

Portions of the upper and lower jaws of the *Iguanodon:* nat. size.

Fig.

1. The dentary part of the lower jaw of a large, probably full-grown *Iguanodon:* nat. size.

   From the Wealden of Tilgate, Sussex. In the British Museum.

2. The outer side of a portion of the back part of the left superior maxillary bone of a probably full-grown *Iguanodon:* nat. size.
3. The inner side of the same specimen.
4. The cut surface of a vertical section taken through the fore part of the same specimen.

From the Wealden near Brook-point, Isle of Wight. In the British Museum.

Jas Dinkel lith.

Iguanodon.

Dinosauria.

PLATE 19.

Iguanodon Mantelli, one third nat. size

Fig.

1. The scapula and coracoid (the upper end is downwards in the figure).
2. An end view of the same specimen showing the coracoid.
3. Front view of the humerus of the same individual.
4. Side view of the same humerus.
5. Back view of the lower half of the same humerus.
6. Condyles of the same humerus.

From the Wealden at Rusper, Sussex. In the Museum of J. B. Holmes, Esq.

Day & Son lithrs

Iguanodon

Dinosauria.

PLATE 20.

Iguanodon Mantelli, one fourth nat. size.

Fig.

1. Front view of the right femur: 1*a*, Outline of the head of the bone: 1*b*, Outline of the condyles of the bone.
2. Back view of the right tibia of a somewhat larger individual.

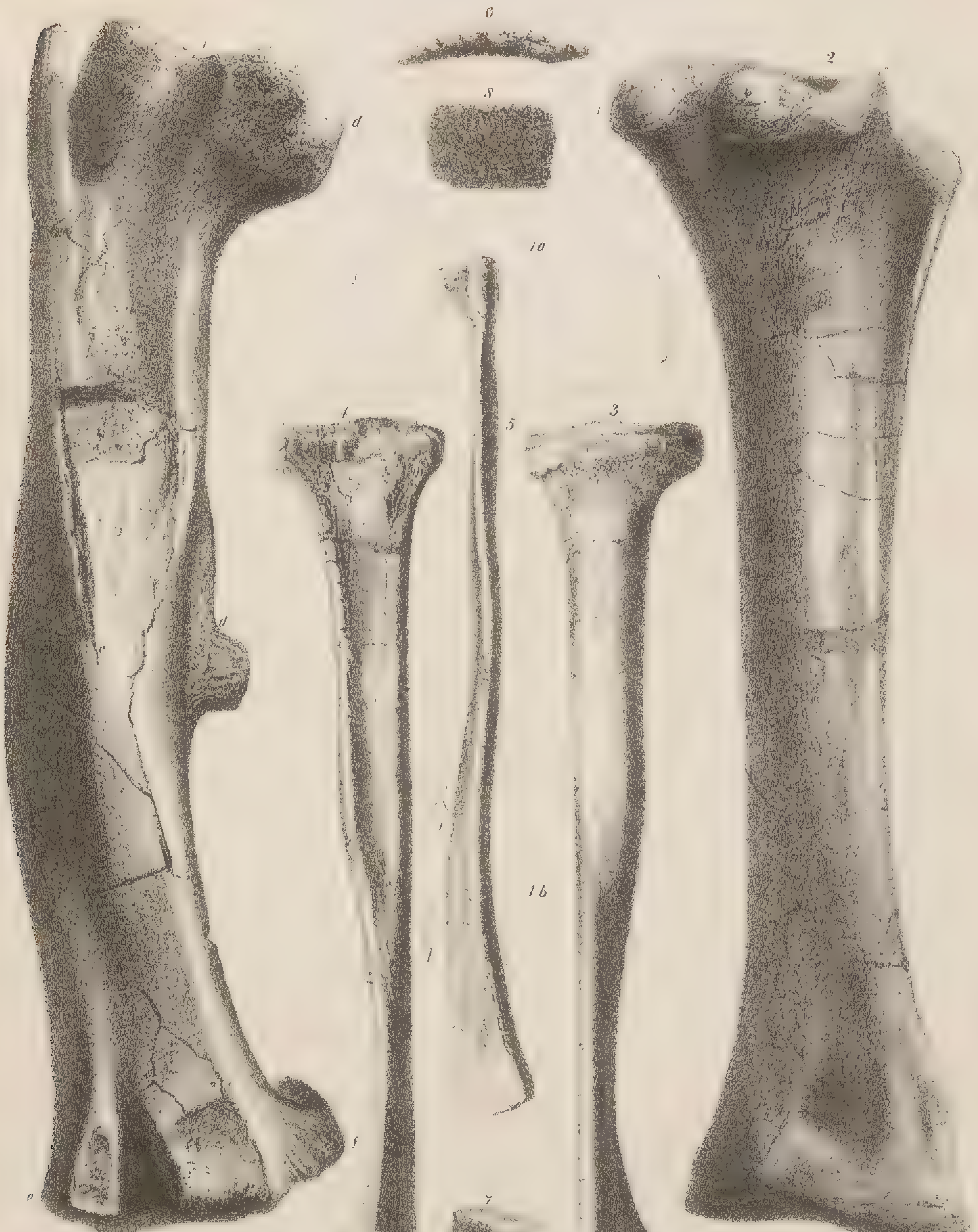
From the Wealden of Tilgate Forest, Sussex. In the British Museum.

3. Outside view of the fibula of a younger Iguanodon.
4. Inside view of the same bone.
5. Front view of the same bone. (The upper end of the bone is downwards in these figures.)
6. Lower end of the same bone.
7. Upper end of the same bone.

From the Wealden of Sussex. In the Museum of J. B. Holmes, Esq,. of Horsham.

8. A slightly magnified view of the surface of a piece of the corium or true skin of the *Iguanodon*.

From the specimen in Pl. 6; from the Wealden of Cowleaze Clime. In the Museum of J. S. Bowerbank, Esq., F.R.S.



Iguanodon.

Miss Holmes & J Dinkel del. Ford & West Imp

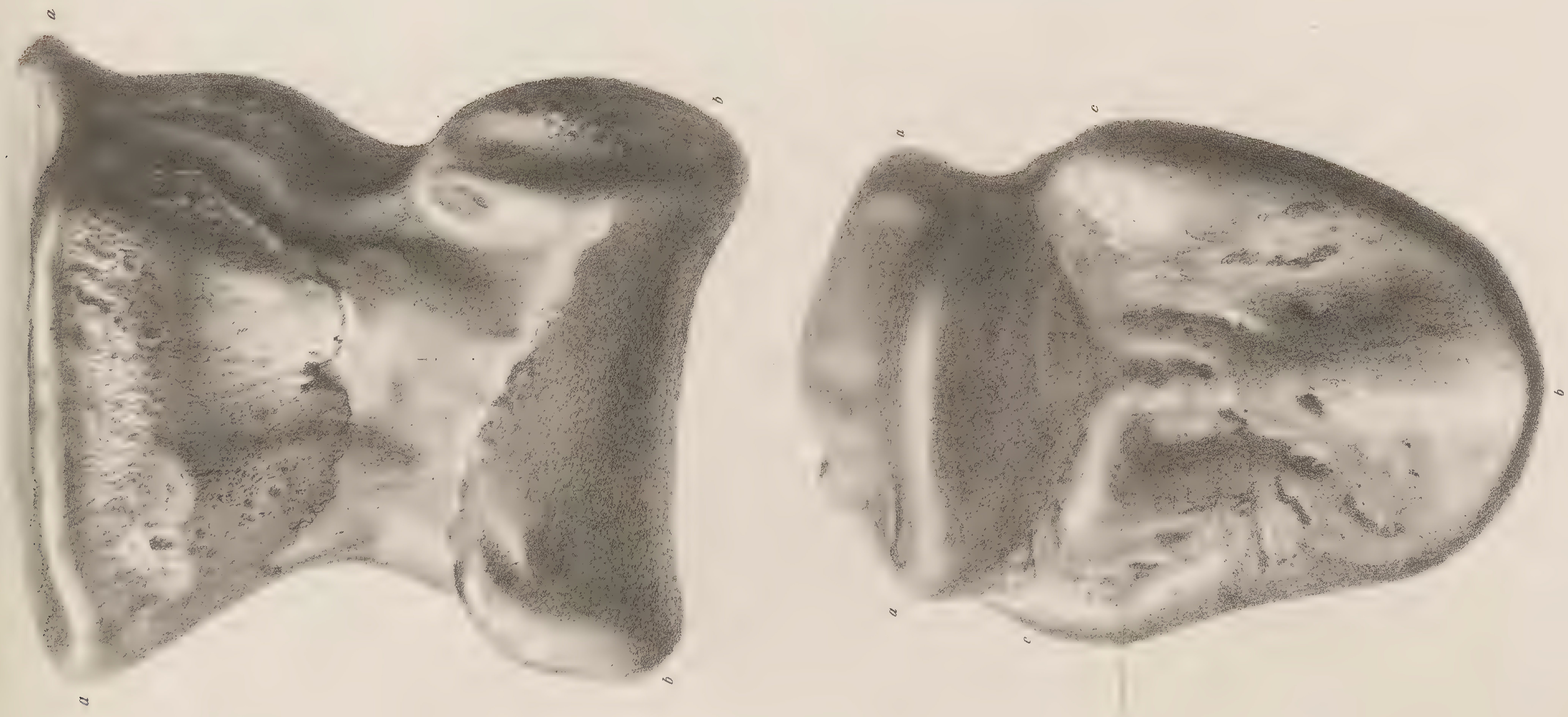
Dinosauria.

PLATE 21.

Fig.

1. A first or proximal phalanx of one of the toes of an *Iguanodon:* nat. size.
2. A last or ungual phalanx of one of the toes of an *Iguanodon:* nat. size.

From the Wealden of the South coast, Isle of Wight. In the Geological Museum of Oxford.



Iguanodon.

Jos Dinkel lith. Ford & West imp.

Dinosauria.

PLATE 22.

Ungual phalanges of modified shape, probably from the extreme toe, outer or inner, of the hind foot of the *Iguanodon.*

Figs. 1 and 2, are of the specimen called '*Horn of the Iguanodon,*' in the Works and Catalogue of Dr. Mantell.

From the Wealden, Sussex. In the British Museum.

Fig.

3. Side view of a similarly shaped phalanx.
4. Upper view of the same phalanx.
5. Upper view of a smaller and similar phalanx.

From the Wealden of Battle, Sussex. In the Museum of Felix Knyvett, Esq.

Iguanodon.

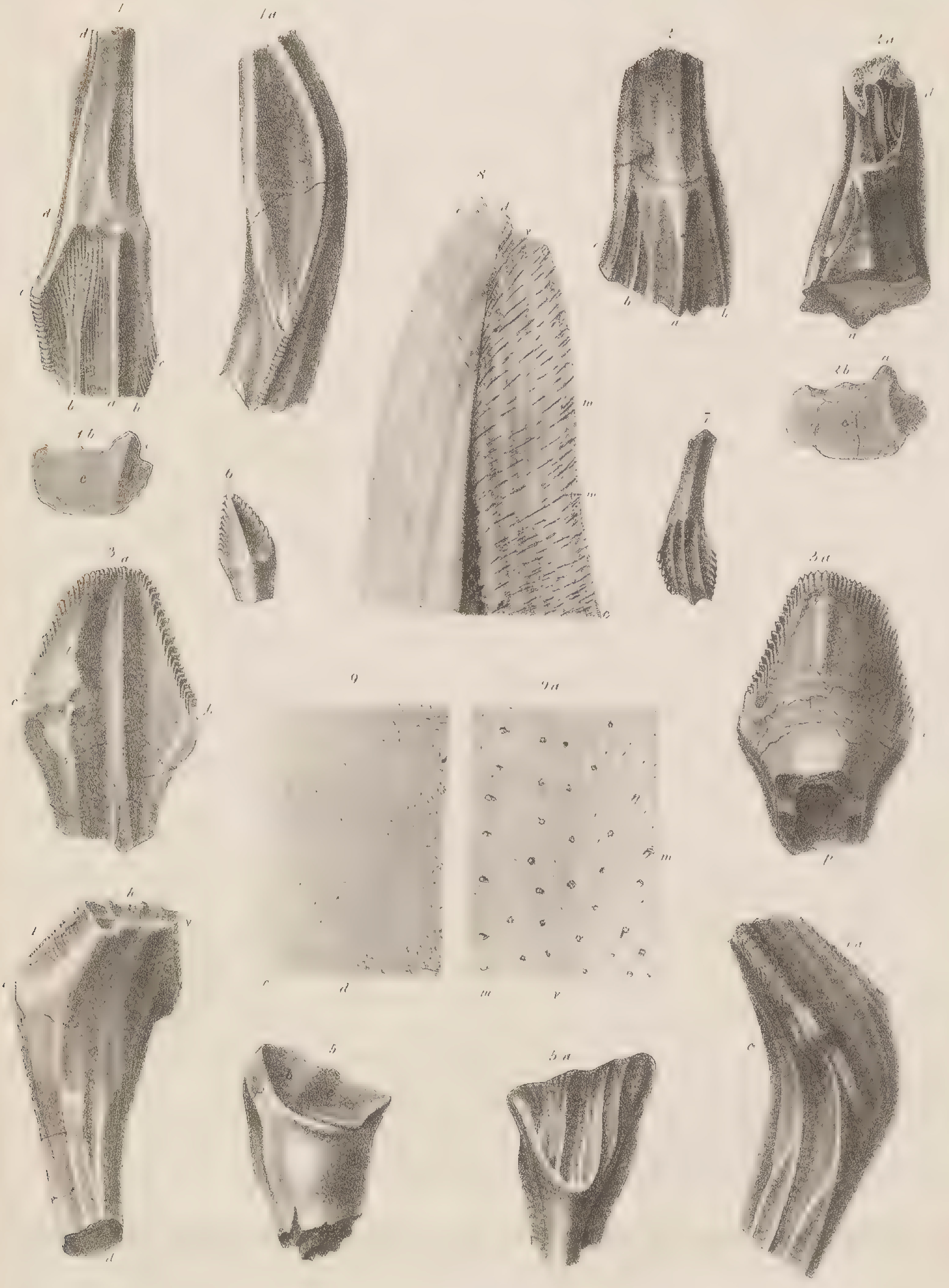
Jos Dinkel Lith

Dinosauria.

PLATE 23.

Different views of the teeth from the upper and lower jaws of the *Iguanodon;* figs. 1—7, nat. size: figs. 8 and 9, highly magnified views of sections, showing structure.

From the Wealden of Tilgate Forest; and Cuckfield, Sussex. In the British Museum.



Jos. Dinkel. lith

Iguanodon.

Dinosauria.

PLATE 24.

Megalosaurus Bucklandii ; nat. size.

Three anterior dorsal vertebræ : *p*, parapophysis, or lower transverse process : *t*, accessory tubercle contributing some attachment to the head of the rib : *d*, diapophyses, or upper transverse process, fractured, which gave attachment to the tubercle of the rib : *b*, oblique buttress extending from the parapophysis to the diapophysis, and contributing to the support of the neural platform : *z*, the prozygapophysis, *z'*, the zygapophysis, forming the ends of the neural platform and articulating the neural arches of the vertebræ with each other, *ns*, the neural spine of the foremost of these vertebræ, *ns'*, the neural spine of the second vertebra ; it expands at its extremity, overhangs the anterior shorter spine, and developes a strong bony plate from its back part which fixes it to *n''*, the similarly developed and modified spine of the third vertebra.

The extraordinary size and strength of the spines of these anterior dorsal vertebræ, indicate the great force with which the head and jaws of the Megalosaurus must have been used.

From the Wealden, near Battle. In the Museum of Samuel H. Beckles, Esq., F.G.S.

Megalosaurus.

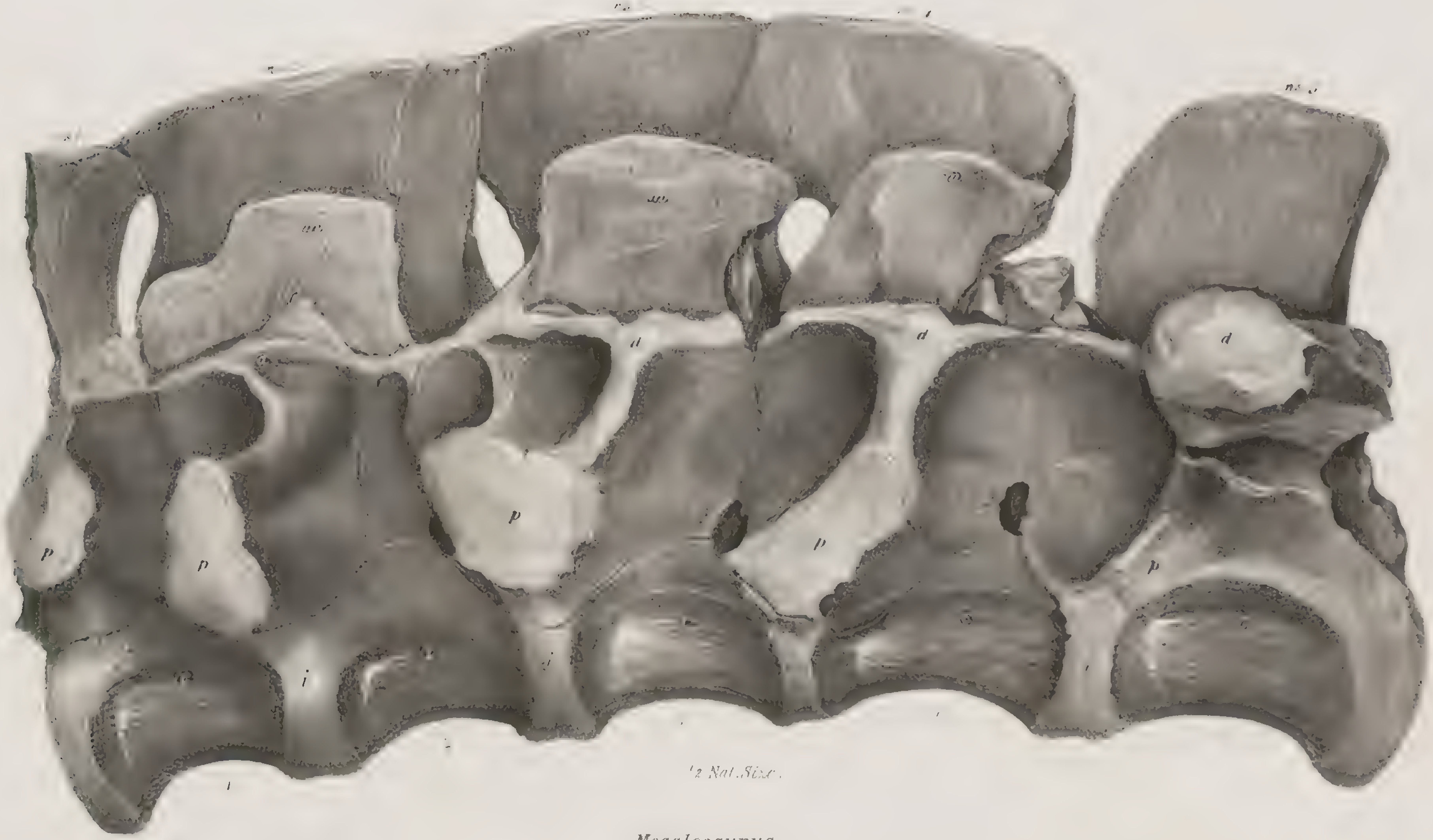
Ford & West Imp.

Dinosauria.

PLATE 25.

Sacrum of the Megalosaurus; half nat. size.

From the Oolitic Slate of Stonesfield, Oxfordshire. In the Geological Museum, Oxford.



½ Nat. Size.

Megalosaurus

Dinosauria.

PLATE 26.

Fig.

1–3. Ribs of the Megalosaurus; one fourth natural size.

4. Pubis of do.

5. Ischium of do.

From the Oolitic Slate of Stonesfield, Oxfordshire.

From Nature [illegible] Erxleben. [illegible] to The Queen.

Megalosaurus.

Dinosauria.

PLATE 27.

Fig. 1. The scapula of the Megalosaurus (?); one fourth nat. size.

From the Wealden, of Sussex. In the Museum of J. B. Holmes, Esq., of Horsham.

Fig. 2. An ulna of a Dinosaur.

From the Wealden of Sussex. In the British Museum.

Fig.1.

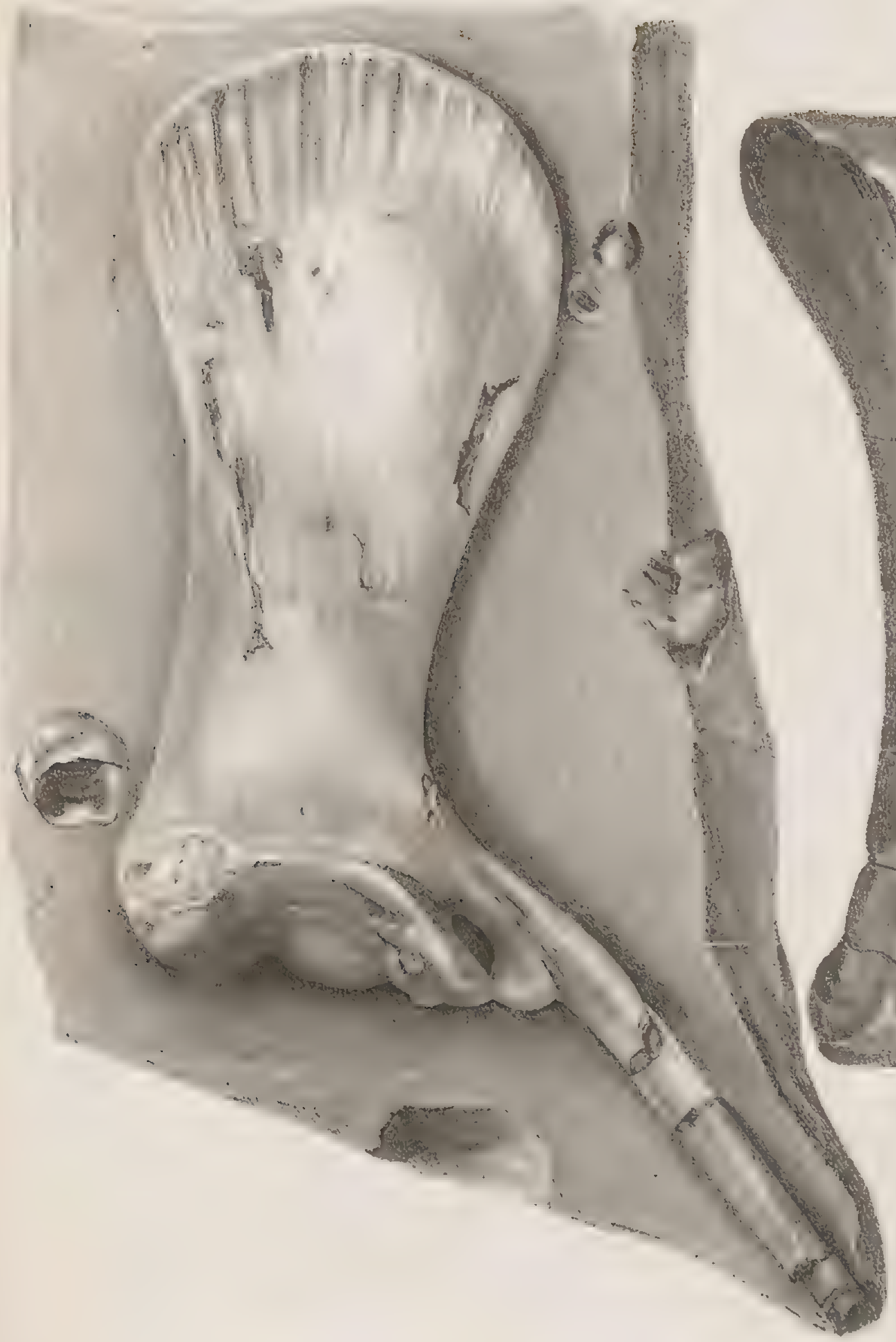
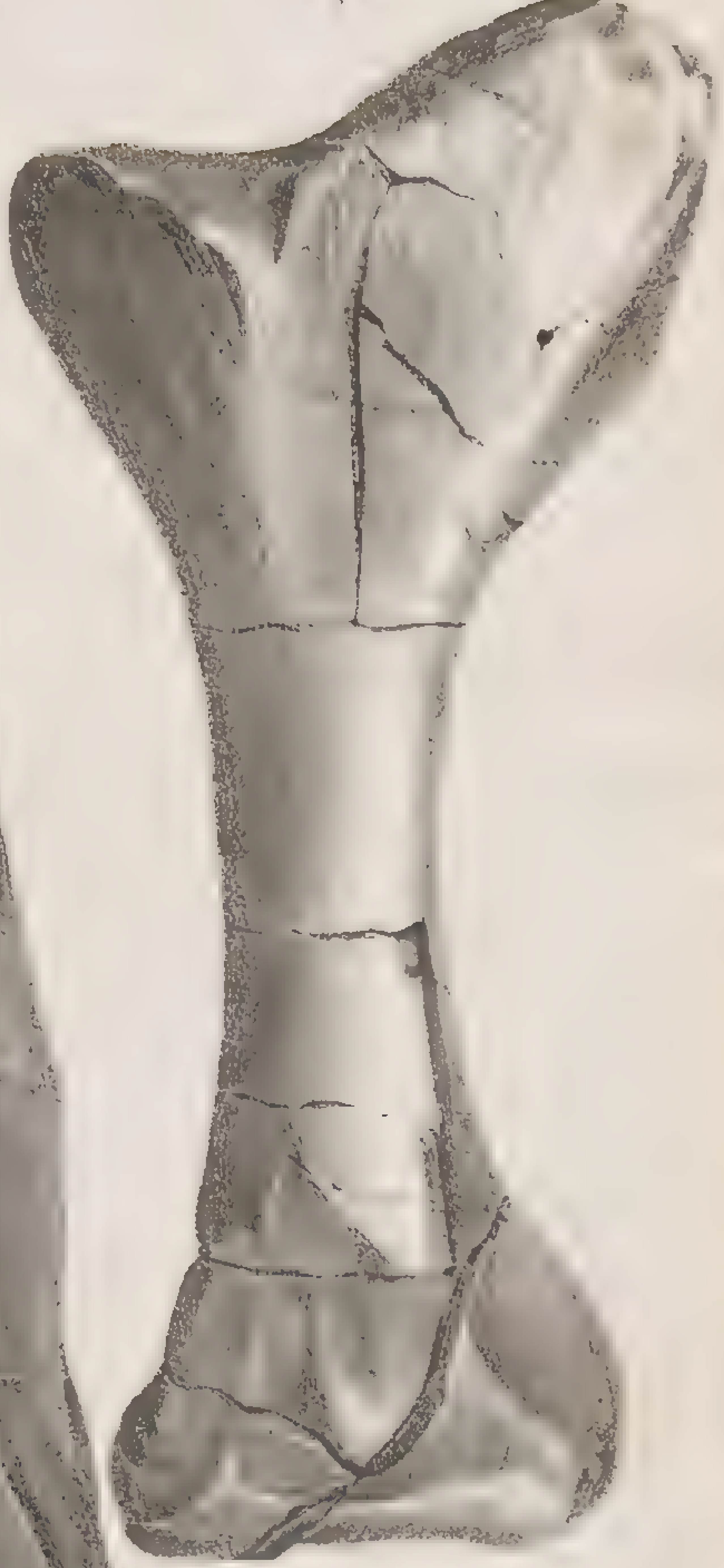


Fig 2



Miss Holmes del. On Stone by J. Erxleben *Day & Son, Lith.rs to the Queen*

Dinosauria.

PLATE 28.

The coracoid of the Megalosaurus; one fourth nat. size.

Fig. 1. Inner surface.
,, 2. Articular border.

From the Oölitic Slate, of Stonesfield, Oxfordshire. In the British Museum.

Megalosaurus.

Dinosauria.

PLATE 29.

The femur of the Megalosaurus ; one fourth nat size.

Fig. 1. Hinder surface.
„ 2. Inner surface.

From the Oolitic Slate, of Stonesfield, Oxfordshire. In the British Museum.

Megalosaurus.

Dinosauria.

PLATE 30.

Femoral condyles of the Megalosaurus; nat. size.

From the Oolitic Slate, of Stonesfield, Oxfordshire. In the British Museum.

Megalosaurus

Dinosauria.

PLATE 31.

The tibia of the *Megalosaurus;* one fourth nat. size.

Fig. 1. Outer surface, with the upper articular end.
,, 2. Hinder surface, with the lower articular end.
,, 3. Section of shaft, showing the medullary cavity.

From the Oolitic Slate, of Stonesfield, Oxfordshire. In the British Museum.

Fig. 1

Fig. 2

Fig. 3

Megalosaurus

Dinosauria.

PLATE 32.

Ungual phalanges of Megalosaurus (?); nat. size.

Fig. 1. Inside view.
,, 2. Outside view.
,, 3. Upper surface.
,, 4. The fractured end of figs. 1 and 2.
,, 5. Side view of a smaller entire phalanx.

From the Wealden Sand, Tilgate, Sussex. In the British Museum.

From Nature on Stone by J. Erxleben. *Day & Son Lith^rs to the Queen.*

Megalosaurus.

Dinosauria.

PLATE 33.

Megalosaurus Bucklandi, nat. size.

Fig. 1. Inside view of a portion of the dentary element of the mandible, with teeth.

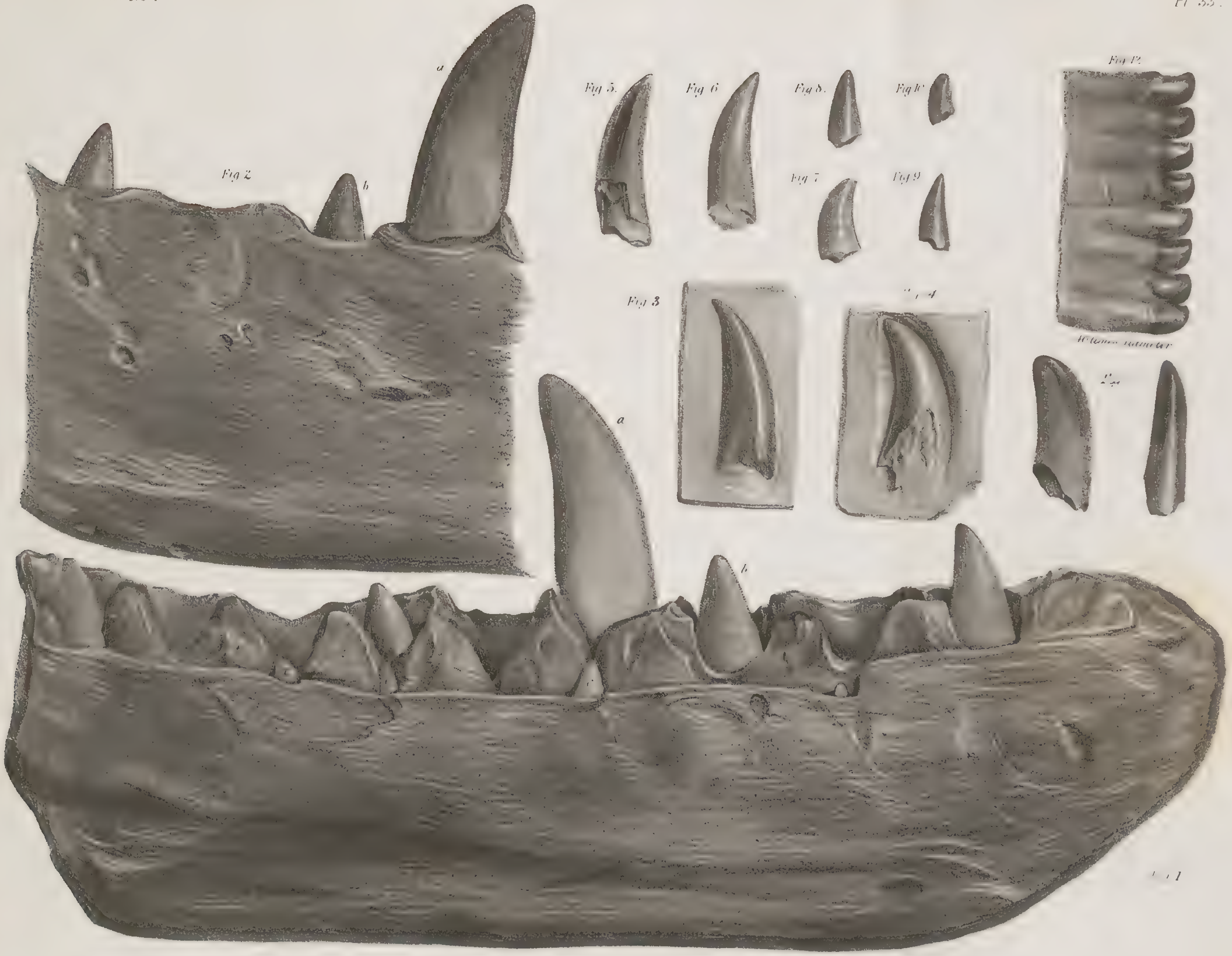
„ 2. Outside view of part of ditto.

„ 3—11. Various teeth, the last much worn.

„ 12. Magnified view of the finely serrated border of the teeth.

Figs. 4, 7, and 9 from the Wealden, of Sussex; fig. 5 from the Cornbrash, of Oxfordshire; fig. 6 from the Bath Oolite, Somersetshire; the rest from the Oolitic Slate, of Stonesfield, Oxfordshire.

All the specimens, save fig. 1, in the Oxford Museum, are in the British Museum.



Megalosarus.

Day & Son, Lith^rs to the Queen

Dinosauria.

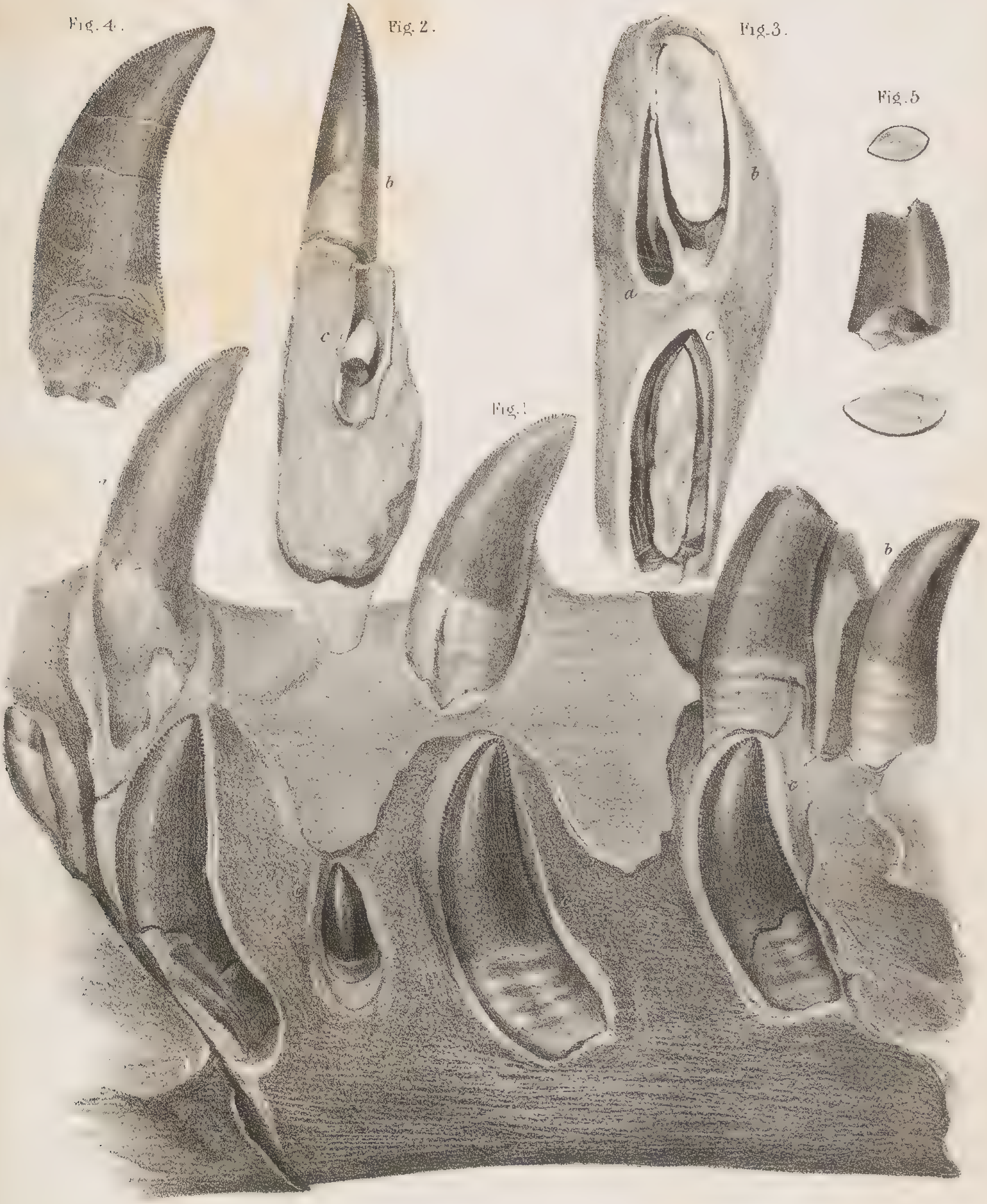
PLATE 34.

Figs. 1—3. A portion of the mandible with teeth of the *Megalosaurus Bucklandi;* nat. size.

The foregoing figures are taken, with the permission of his Grace the Duke of Marlborough, from a specimen in his Grace's collection, from the Oolitic Slate, of Stonesfield, Oxfordshire.

Fig. 4. Side-view of a full-sized tooth of the Megalosaurus.

„ 5. A portion of a tooth of *Megalosaurus,* from the Inferior Oolite, of Selsly Hill, Gloucestershire. In the British Museum.



Day & Son Lith^rs to The Queen

Megalosaurus.

Dinosauria.

PLATE 35.

Portion of the skeleton of the Hylæosaurus, one fourth nat. size.

From the Wealden of Tilgate, Sussex. In the British Museum.

From Nature on Stone by J. Erxleben

Hylaeosaurus armatus

Dinosauria.

PLATE 36.

Four anchylosed bodies of sacral vertebræ of a young Hylæosaurus, nat size.

Fig.
1. Oblique side view, showing the expanded neural canal.
2. Under view.

From the Wealden of Tilgate Forest, Sussex. In the Collection of Captain Lambart Brickenden, F.G.S.

Fig 1

Fig. 2.

Jos Dinkel lith W West Imp

Dinosauria.

PLATE 37.

Portions of the sacrum of the Hylæosaurus, half nat. size.

Fig.

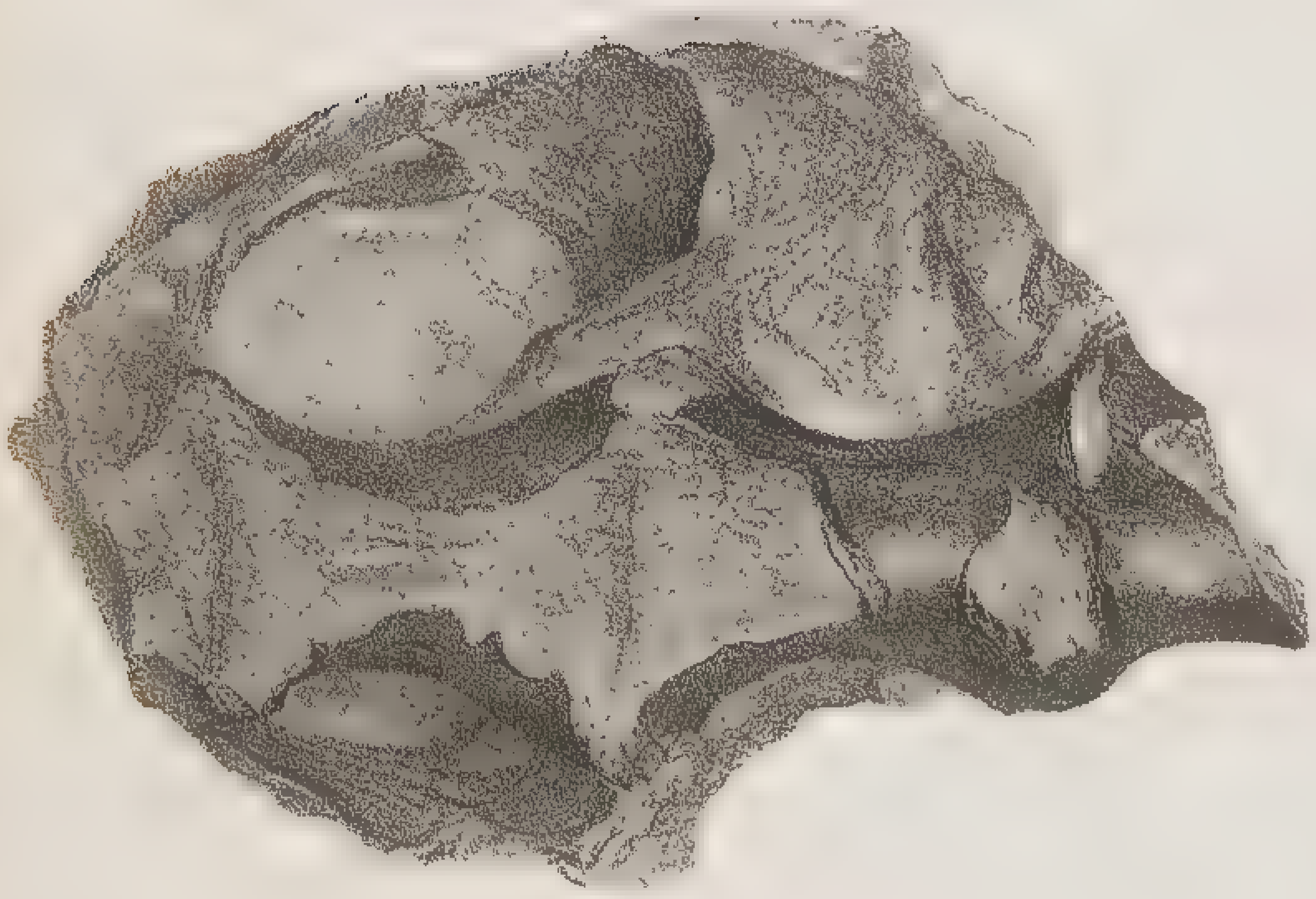
1. Under view of the third and fourth, with portions of contiguous anchylosed, sacral vertebræ.

   From the Wealden of Tilgate, Sussex. In the British Museum.

2. Side view.
3. Under view.
4. Upper view of the third, with portions of the second and fourth, sacral vertebræ.

   From the submerged Wealden Beds, South Coast, Isle of Wight. In the British Museum.

1



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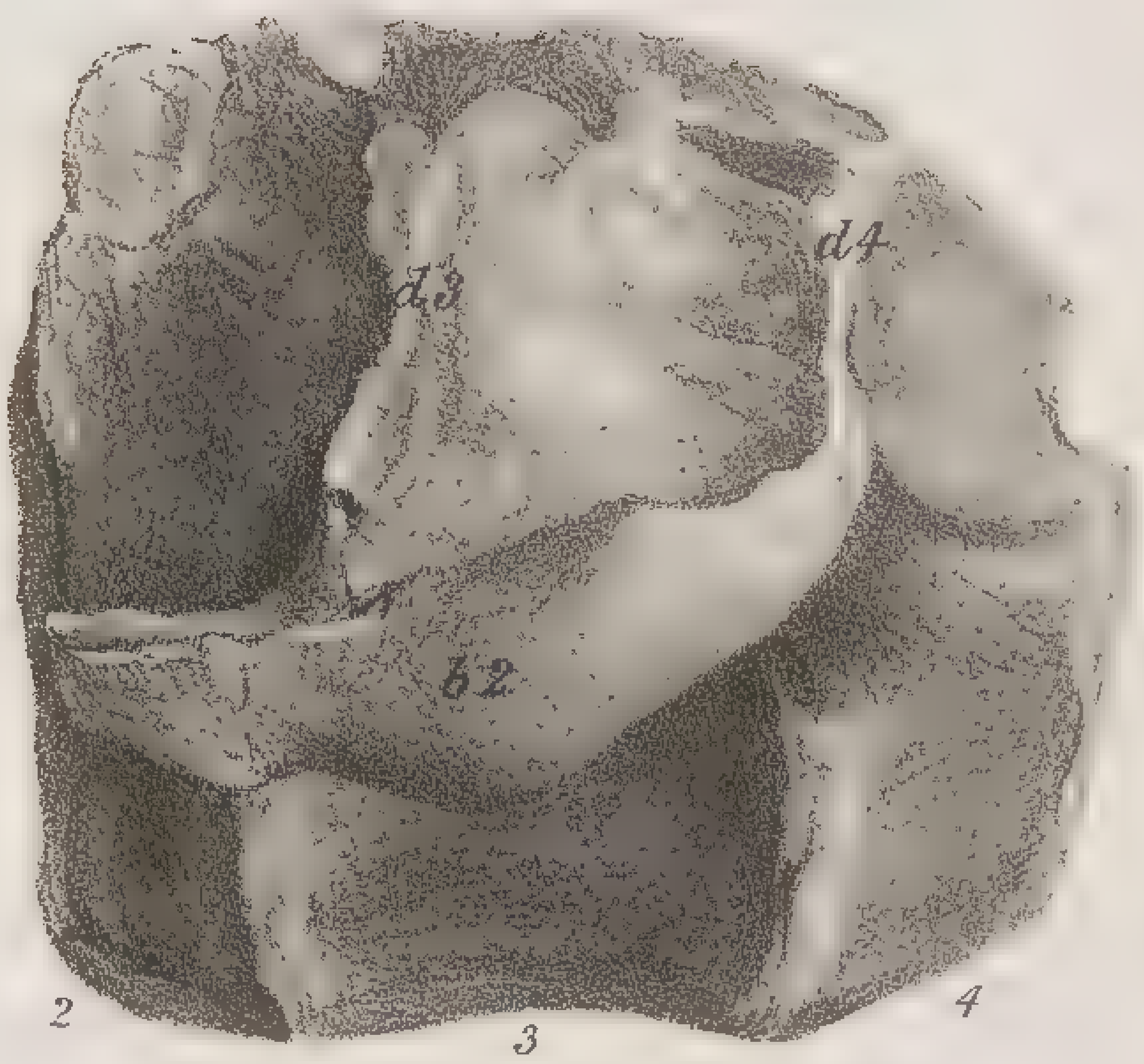

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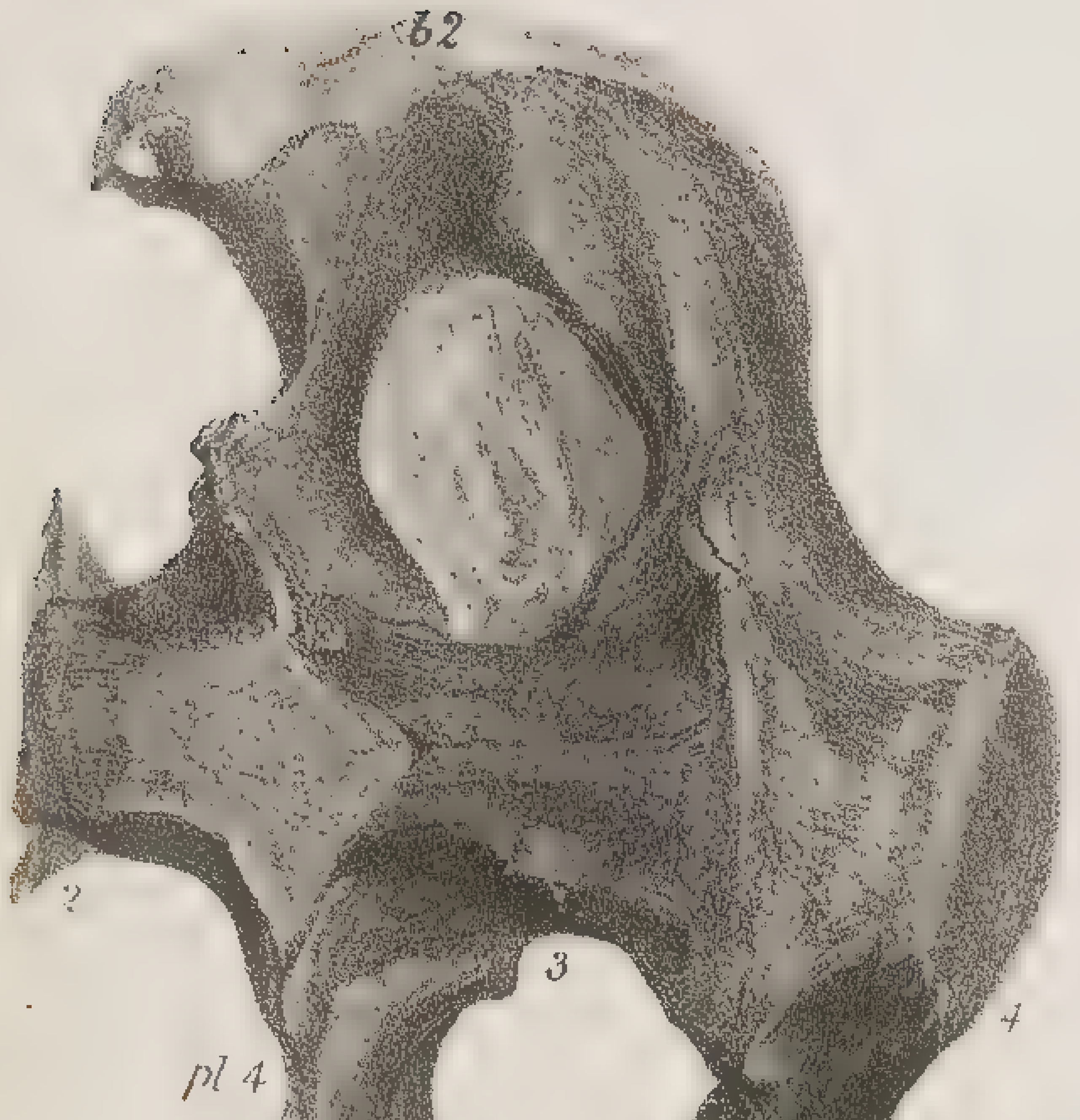

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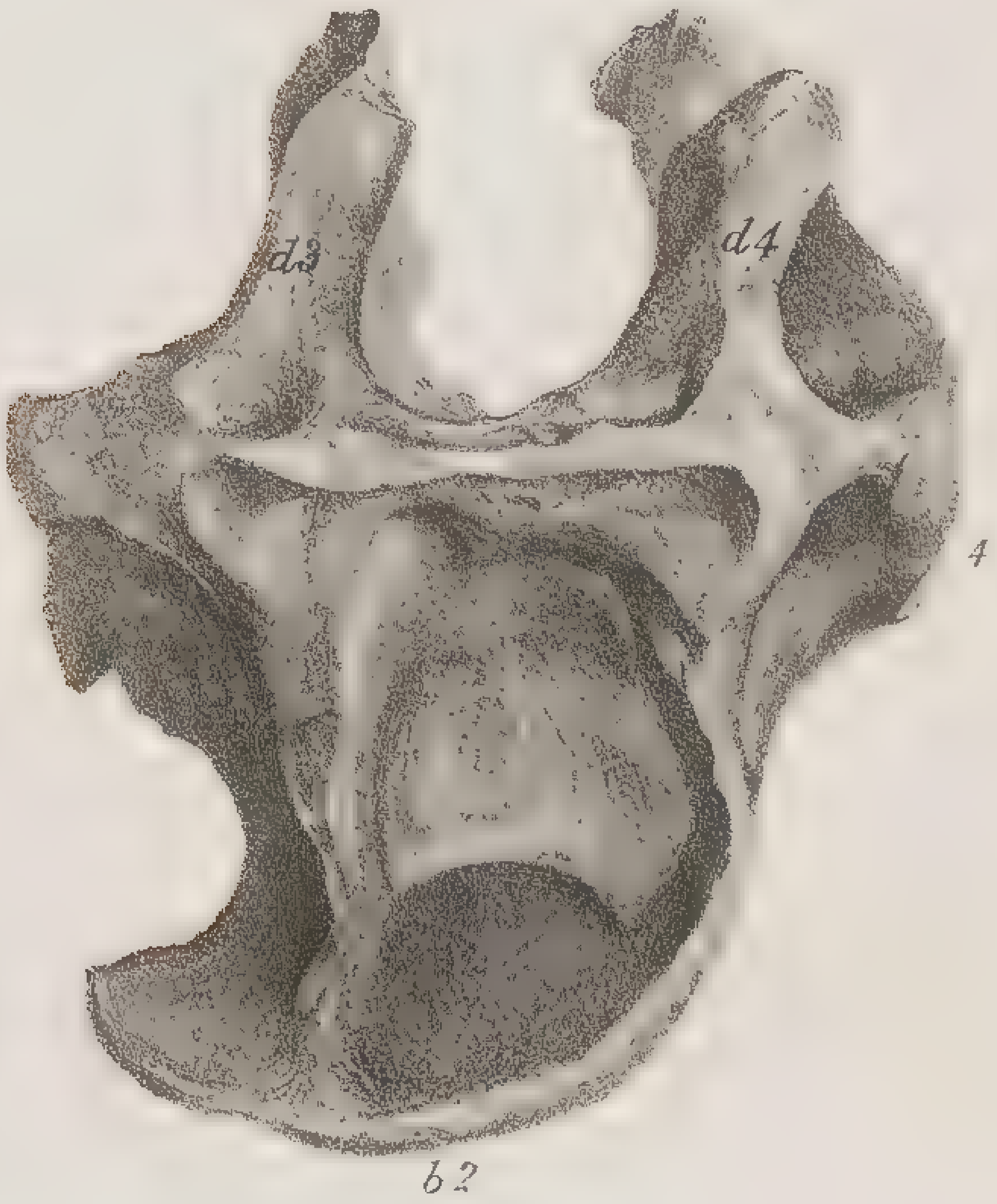


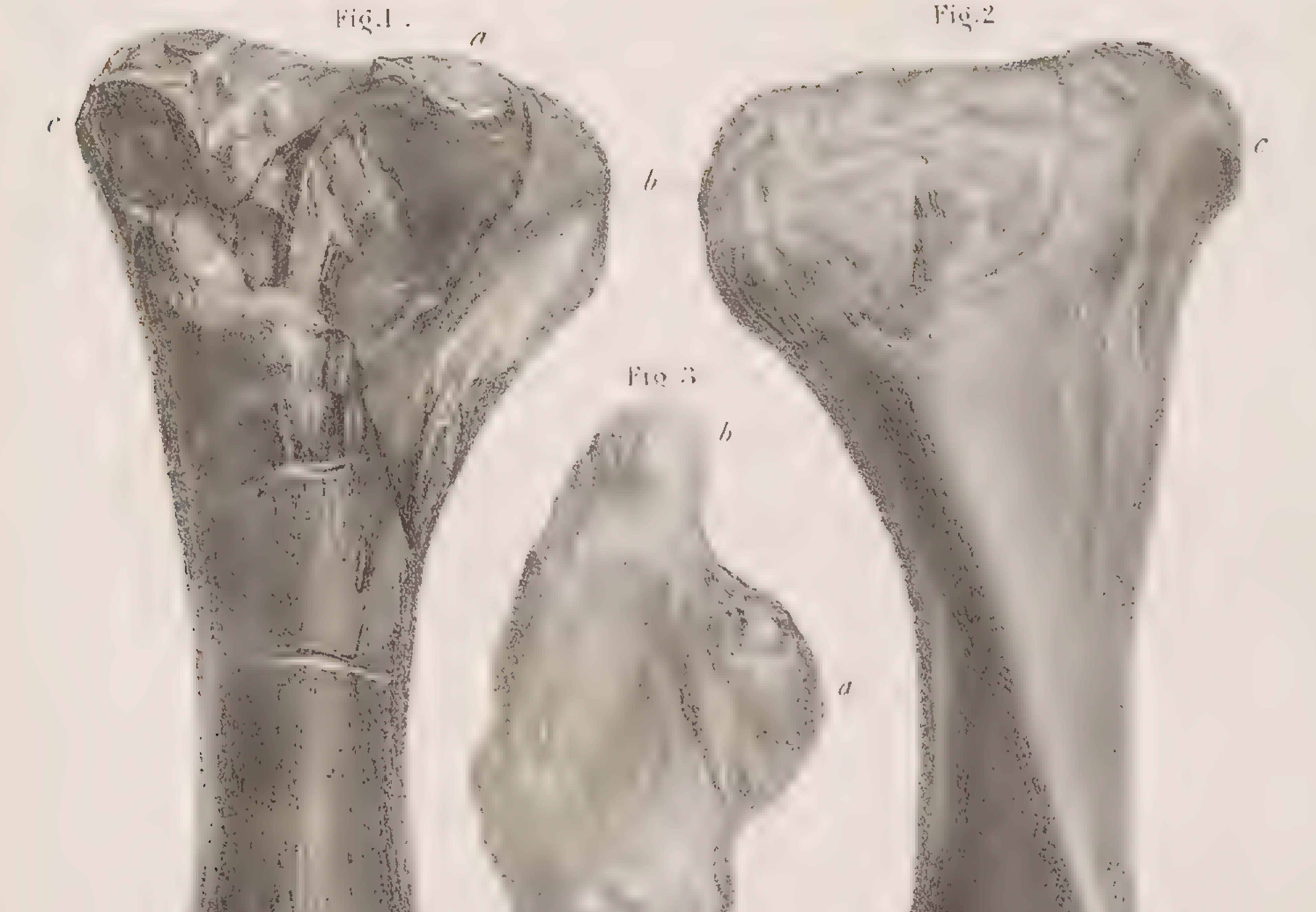
Dinosauria.

PLATE 38.

Tibia of the Hylæosaurus, half nat. size.

Fig.
1. Inner side view.
2. Outer side view.
3. Upper articular end.

From the Wealden at Bolney, Sussex. In the British Museum.



½ *Nat. size.*

Dinosauria.

PLATE 39.

Fig.

1. Outside of a portion of jaw.
2. Inside of the same portion of jaw.
3. Upper view of the same.
4. The hinder fractured end of the same.
5. The fore fractured end of the same.

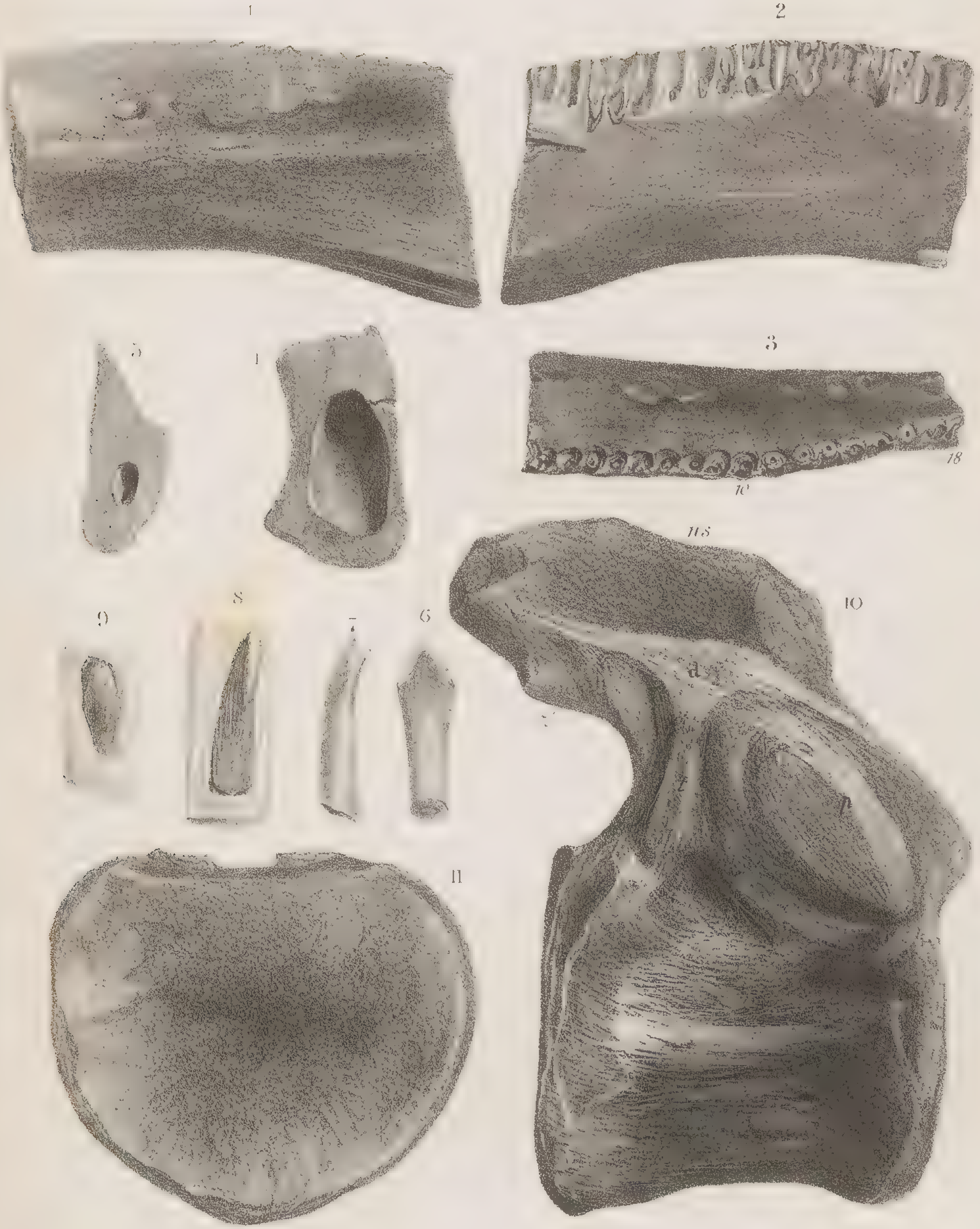
6 and 7. Two views of a tooth.

8. Side view of a tooth, imbedded in Wealden matrix.
9. A portion of a tooth, similarly imbedded.

The above specimens are referred, with probability, to the Hylæosaurus.

10. Side view of a dorsal vertebra of the Hylæosaurus.
11. Articular surface of the body of the same vertebra.

From the Wealden of Tilgate Forest, Sussex. In the British Museum.



Dinosauria.

PLATE 40.

The osseous basis of a dermo-neural spine of the Hylæosaurus.

Fig.

1. A section, highly magnified, of the osseous tissue.
2. Hinder border of the spine (reversed).
3. Side view of the spine.

From the Wealden of Tilgate Forest, Sussex. In the British Museum.

Fig. 1.
Fig. 2
Fig. 3.
a
a
c
d

Dinosauria.

PLATE 41.

Caudal vertebræ of the Hylæosaurus, one sixth nat. size.

Fig.

1. Ten vertebræ from the base of the tail.
2. Eleven vertebræ from near the end of the tail.
3. Under view of anterior caudal vertebræ, showing the form, and place of articulation, of the hæmapophyses.
4. Back view of a hæmal arch from the same (*h*) region of the tail (half nat. size).

4′. Under view of middle caudal vertebræ, showing the shape of the hæmapophyses, *h*.

5. Side view of a hæmal arch from a middle caudal vertebra (half nat. size).
6. Under view of caudal vertebræ beyond the middle of the tail.
7. Back view of a hæmal arch from one of these vertebræ (half nat. size).

The further modification of the hæmapophyses in the posterior caudal vertebræ is shown in fig. 2.

From the Wealden of Tilgate, Sussex. In the British Museum.

Fig 1

Fig 2

Fig 5

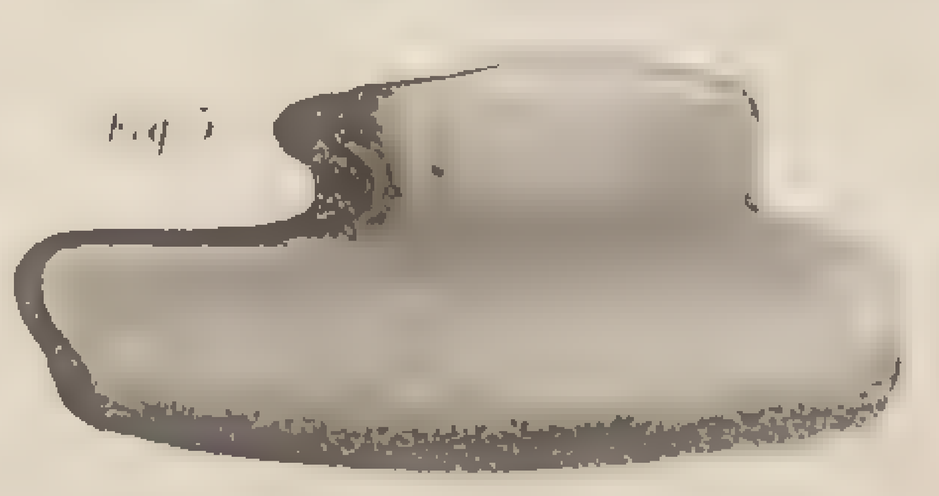


Fig 6

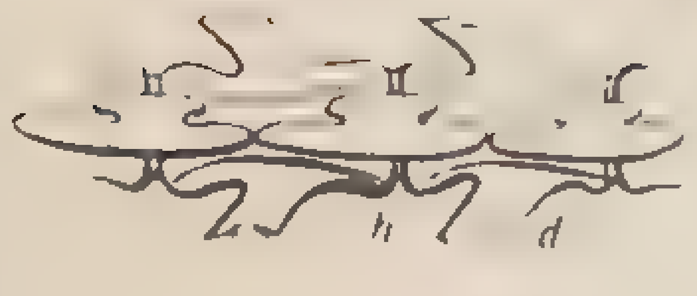


Fig 7

Fig 8

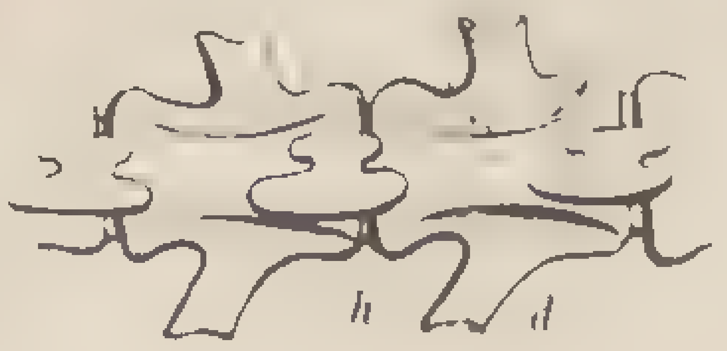
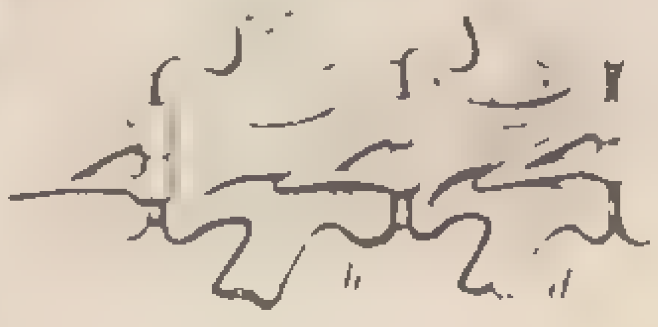


Fig 3

[illegible]



Jos Dinkel lith W West imp

Dinosauria.

PLATE 42.

Metapodium of a foot of the Hylæosaurus.

Fig.
1. Front or upper view of the three normally developed metapodials.
2. Tibial side view of the innermost, answering to the second.
3. Fibular side view of the outermost, answering to the fourth.

From the Wealden of Tilgate, Sussex. In the British Museum.

Foot of Hylæosaurus.

Dinosauria.

PLATE 43.

Foot of a young Iguanodon, upper or front view; nat. size.

From the submerged Wealden Beds, South Coast, Isle of Wight. In the Museum of Samuel H. Beccles, Esq., F.G.S.

Foot of Iguanodon

Dinosauria.

PLATE 44.

Parts of the foot of a young Iguanodon, nat. size.

Fig.

1. Inner or tibial side view of the second toe, II, with rudiment of the first, I.
2. Inner or tibial side view of the first, second, and third phalanges of the middle toe.
3. Outer or fibular side view of the fourth or outer toe.

From the submerged Wealden Beds, South Coast, Isle of Wight. In the Museum of Samuel H. Beccles, Esq., F.G.S.

Fig. 1.
II 1
II 2
II 3
Fig. 2.
III 1
III 2
III 3
Fig. 3.
IV
IV 1
IV 2
IV 3
IV 4.
IV 5

PLATE 45.

DINOSAURIA.

Teeth of upper and lower jaw, Iguanodon; natural size.

From the Wealden of Sussex.

Jos Dinkel lith

W West imp

Dinosauria.

PLATE 46.

Iguanodon Mantelli (nat. size).

Figs.

1. Left radius and ulna, thenal or palmar aspect.
2. Left ulna, proximal end, showing articular surface for the radius.
3. Left radius, proximal end, showing articular surface for the ulna.
4. Section of shaft of ulna.
5. Section of shaft of radius.

From the Wealden Clay, Sussex. In the Collection of S. H. Beckles, Esq., F.R.S., F.G.S., &c.

L. Griesbach del. et lith. Mintern Bros imp.

Iguanodon Mantelli.

Dinosauria.

PLATE 47.

Iguanodon Mantelli (nat. size).

Figs.

1. Right radius, distal end, anconal or dorsal aspect.
2. Osseous core of radial spine, proximal or upper margin.

From the Wealden Clay, Sussex. In the Collection of S. H. Beckles, Esq., F.R.S., F.G.S., &c.

L. Griesbach del et lith

Iguanodon Mantelli.

Dinosauria.

PLATE 48.

Iguanodon Mantelli (nat. size).

Fig.

1. Bones of left fore-foot.

3 *a*. Ungual phalanx of second digit, proximal or articular surface.

3 *b*. Ib., ib., distal surface.

From the Wealden Clay, Sussex. In the Collection of S. H. Beckles, Esq., F.R.S., F.G.S., &c.

C. L. Griesbach del et lith. Mintern Bros imp.

Iguanodon Mantelli.

Dinosauria.

PLATE 49.

Iguanodon Mantelli (nat. size).

Figs.

1. Part of right mandibular ramus, inner side view.
2. Upper molar, outer side.
3. Ib., inner side.
4. Ib., front view.
5. Lower molar, outer side.
6. Ib., inner side.
7. Ib., front view.
8. Part of right mandibular ramus and teeth, inner side view, of a younger individual.
9. Cranium and upper molars, outer side view, of a smaller Iguanodon.
10. Maxillary tooth of do., magnified.

Figs. 1—7, from the Wealden Clay, Sussex. In the Collection of S. H. Beckles, Esq., F.R.S., F.G.S., &c. Fig. 8, from the Middle Purbeck of Swanage. In the Collection of A. J. Hogg, Esq. Figs. 9, 10, from the Wealden of the Isle of Wight. In the Collection of the Rev. W. Fox, M.A.

CL Griesbach del. et lith.   Mintern Bros imp.

Iguanodon Mantelli.

Dinosauria.

PLATE 59.

Genus IGUANODON.

FIG.

1. Inner side-view of the dentary element of the right mandibular ramus, *Iguanodon Mantelli;* nat. size.
2. Anterior surface of a worn upper molar of a younger *Iguanodon Mantelli.*
3. Inner surface of the same tooth.
4. Outer surface of do.
5. Posterior surface of a lower molar of the same *Iguanodon Mantelli.*
6. Inner surface of the same tooth.
7. Outer surface of do.
8. Inner side-view of a portion of the right mandibular ramus of a younger *Iguanodon Mantelli;* nat. size.
9. Major part of the skull of *Iguanodon Foxii;* nat. size.

9 *a.* Portion of left tympanic and mandibular ramus of the same skull; nat. size (drawn without reversing).

10. Outer side-view of a worn, right, upper molar of the same skull; magn. 5 diams.

Figs. 1—7, from the Wealden Clay of Sussex, are in the Collection of S. H. Beckles, Esq., F.R.S., F.G.S., &c. Fig. 8, from the Middle Purbeck of Swanage, is in the Collection of A. J. Hogg, Esq. Figs. 9, 9 *a*, 10, from the Wealden of the Isle of Wight, are in the Collection of the Rev. W. Fox, M.A., of Brixton, in that island.

Dinosauria.

PLATE 61.

Bothriospondylus suffossus.

Fig.

1. Hæmal or under view of centrum of sacral vertebra.
2. Neural or upper view of the same.
3. Hind view of the same.
4. Right side view of the same.

All the figures are of the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C.L Griesbach. del & lith

M & N Hanhart imp

Dinosauria.

PLATE 62.

Bothriospondylus suffossus.

FIG.

1. Hind view of terminal centrum of sacral vertebra.
2. Right side view of the same.
3. Hæmal view of the same.
4. Neural view of mutilated centrum of sacral vertebra, restored in outline.
5. Right side view of the same.
6. Hæmal view of the same, restored in outline.

All the figures are of the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C. L. Griesbach

Mintern Bros. lith.

BOTHRIOSPONDYLUS SUFFOSSUS

Dinosauria.

PLATE 63.

Bothriospondylus suffossus.

Fig.

1. Right side view of centrum of dorso-lumbar vertebra.
2. Part of fore surface of the same, restored in outline.
3. Hind surface of the same.
4. Part of hæmal surface of the same, restored in outline.
5. Neural surface of the same.

All the figures are of the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

np
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6
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np
np
b
a
4
np
2
5
o
n
f
f
n
np
nt

Dinosauria.

PLATE 64.

Omosaurus armatus.

Fig.

1. Side-view of neural arch and spine of a cervical vertebra.
2. Upper-view of the same.
3. Side-view of a cervical vertebra of *Varanus niloticus.*
4. Upper-view of the same.

All the figures are of the natural size.

The subject of figs. 1 and 2 is from the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C. L. Griesbach del. et lith.

OMOSAURUS.

Dinosauria.

PLATE 65.

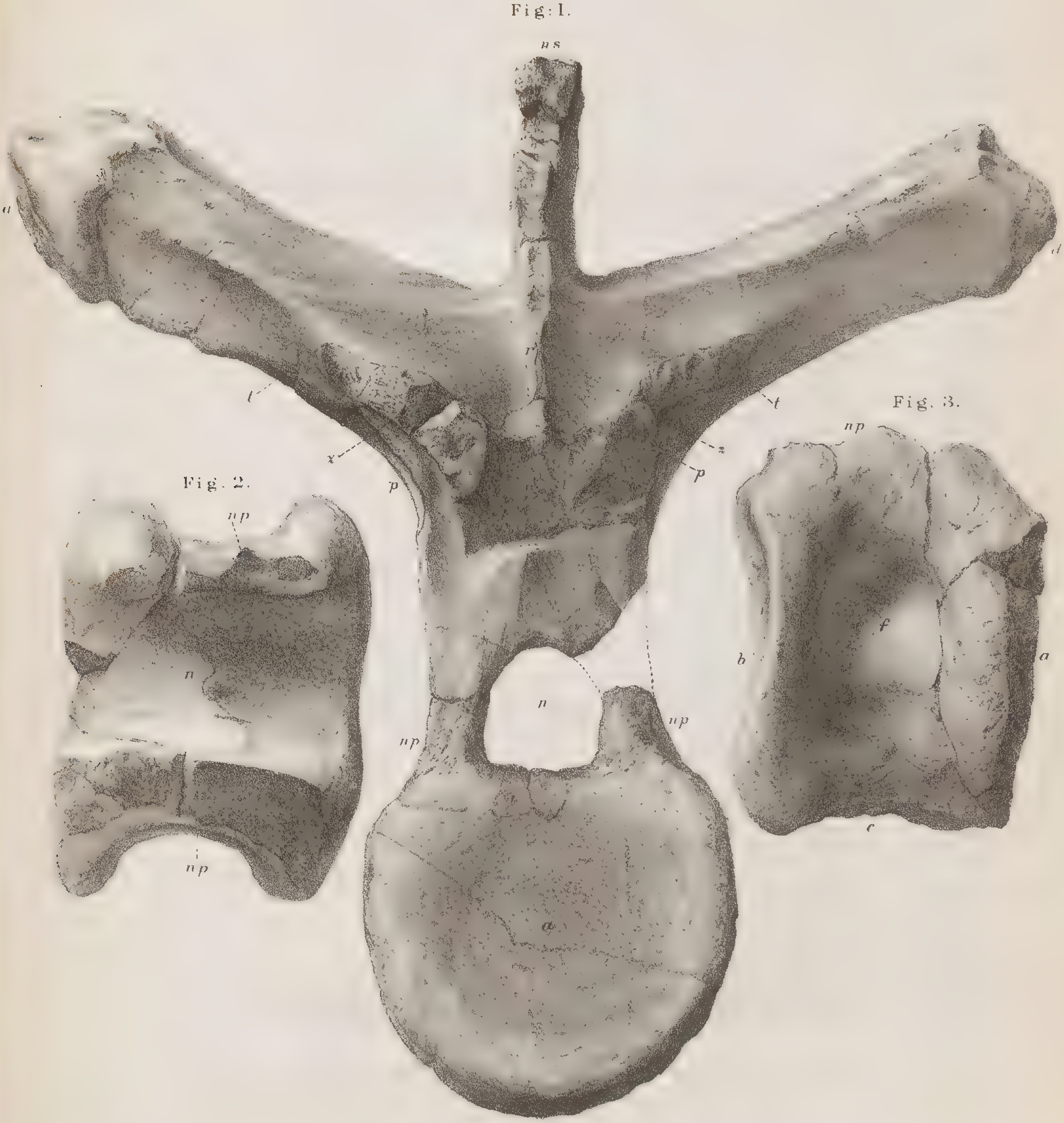
Omosaurus armatus.

Fig.

1. Front-view of a dorsal vertebra.
2. Upper-view of the centrum of a dorsal vertebra.
3. Side-view of the same.

The figures are of half the natural size.

From the Kimmeridge Clay of Swindon, Wilts. In the British Museum.



C. L. Griesbach del et lith

OMOSAURUS

Mintern Bros. imp.

Dinosauria.

PLATE 66.

Omosaurus armatus.

Fig.

1. Back-view of the neural arch of the dorsal vertebra, fig. 1, Pl. XII.
2. Side-view of the neural arch of the same vertebra.
3. Side-view of the centrum and base of neurapophysis of the same.

The figures are of half the natural size.

From the Kimmeridge Clay of Swindon, Wilts. In the British Museum.

Fig: 1.

Fig: 2.

Fig: 3.

J. L. Griesbach del. et lith. Mintern Bros. imp.

OMOSAURUS

Dinosauria.

PLATE 67.

Omosaurus armatus.

Fig.

1. Front-view of an anterior caudal vertebra.
2. Upper-view of end of neural spine.
3. Upper-view of centrum and right pleurapophysis.
4. Under-view of the same.
5. Proximal end of fourth metacarpal.
6. Distal end of the same.

All the figures are of the natural size.

From the Kimmeridge Clay of Swindon, Wilts. In the British Museum.

Fig. 3.
Fig 2.
Fig: 4.
Fig: 1.
Fig: 5.
Fig: 6.

Dinosauria.

PLATE 68.

Omosaurus armatus.

Fig.

1. Back-view of an anterior caudal vertebra.
2. Right side-view of centrum and neural arch of the same.
3. Left side-view of zygapophyses and neural spine of the same.
4. Proximal end of a terminal or ungual phalanx.
5. Distal end of the same.

All the figures are of the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

Mintern Bros.

OMOSAURUS.

Dinosauria.

PLATE 69.

Omosaurus armatus.

FIG.

1. Side-view of a middle caudal vertebra.
2. Back-view of the same.
3. Under-view of the centrum of the same.
4. Under-view of two middle caudal vertebræ, the foremost wanting its hæmal arch, of *Monitor niloticus.*
5. Side-view of a middle caudal vertebra of the same.

Figs. 1—3 are figured a little more than half the natural size; figs. 4 and 5, natural size. The subject of figs. 1—3 is from the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

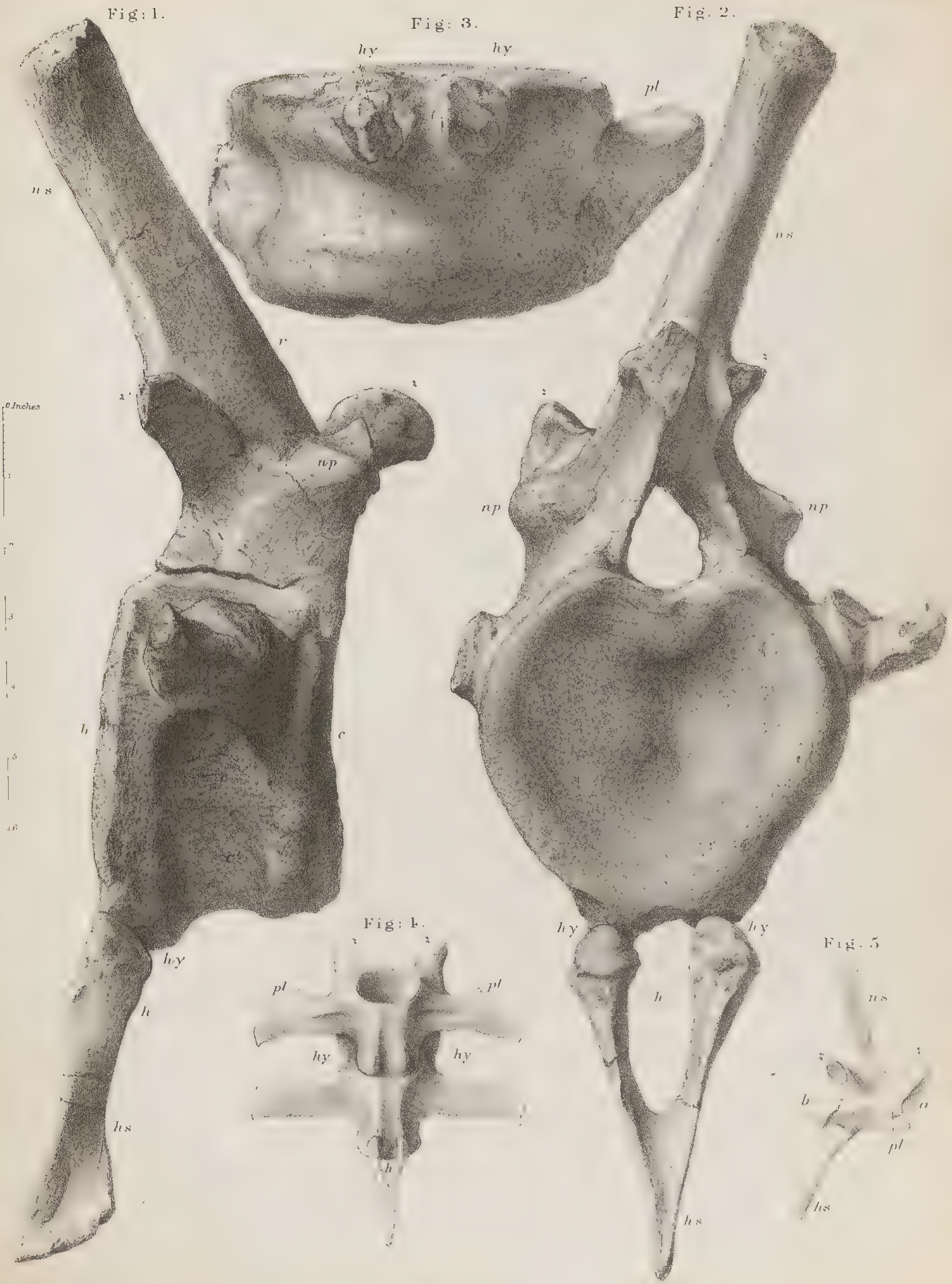


Fig: 1.
Fig: 3.
Fig. 2.
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0 Inches
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np
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c
hy
h
hs
Fig: 4.
pl
pl
hy
hy
h
hy
hy
h
hs
Fig. 5
ns
b
a
pl
hs

Dinosauria.

PLATE 70.

Omosaurus armatus.

FIG.

1. Thenal or palmar surface of the left humerus.
2. Anconal surface of the same.
3. Proximal end of the same.
4. Distal end of the same.
5. Transverse section of narrowest part of the shaft of the same.
6. Thenal surface of the left humerus of a *Monitor niloticus.*
7. Anconal surface of the left radius.
8. Thenal surface of the same.
9. Proximal end of the same.
10. Distal end of the same.
11. Transverse section of narrowest part of the shaft of the same.
12. Thenal surface and proximal end of the left radius of a *Monitor niloticus.*
13. Radial surface of the left ulna.
14. Ulnar surface of the same.
15. Radial surface of the left ulna of a *Monitor niloticus.*

Figs. 1—5, 7—11, 13 and 14, are figured one fourth the natural size, from the Kimmeridge Clay at Swindon, Wilts. In the British Museum. Figs. 6, 12, 15, are of the natural size.

C.L. Griesbach del et lith

Mintern Bros imp

Dinosauria.

PLATE 71.

Omosaurus armatus.

FIG.

1. Anconal surface of the fourth left metacarpal.
2. Radial surface of the same.
3. Anconal surface of a third left metacarpal.
4. Ulnar surface of the same.
5. Proximal end of the same.
6. Distal end of the same.

All the figures are two thirds the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

$\frac{2}{3}$

Fig. 1.

46013

Fig. 2.

Fig: 5.

Fig 6.

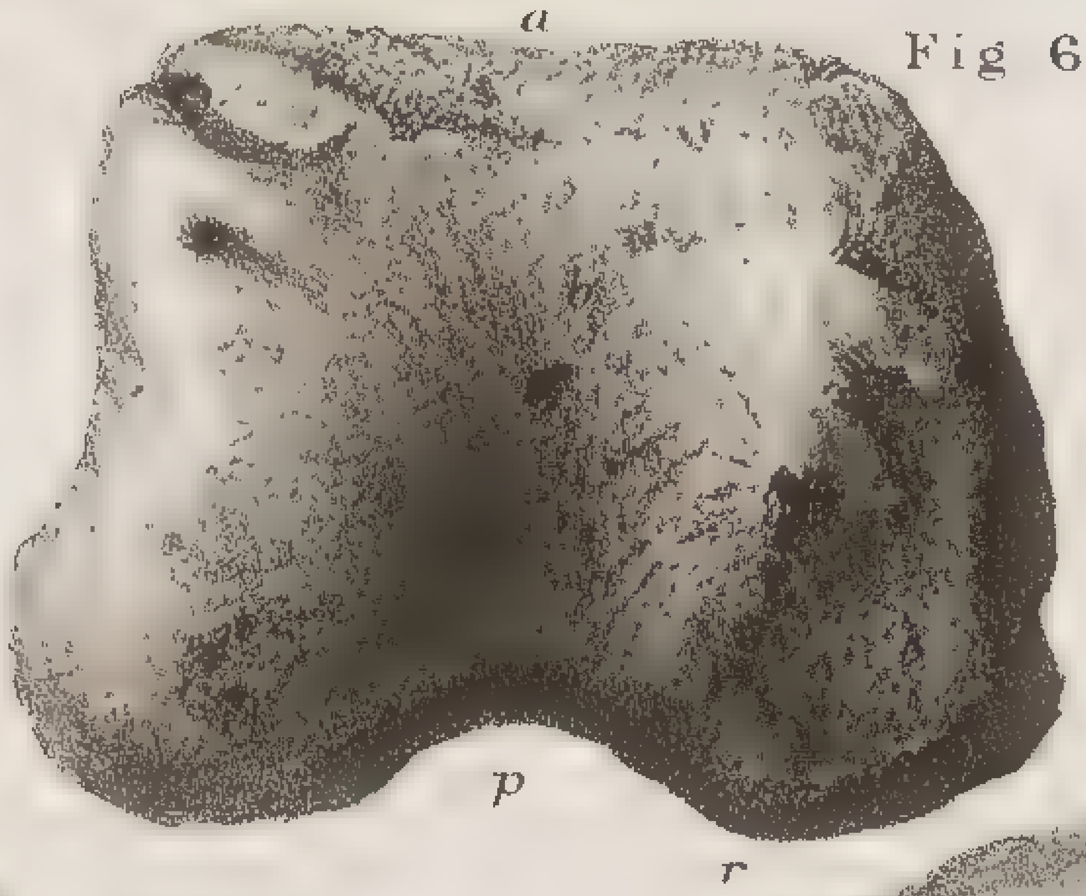


Fig: 3.

Fig. 4.

C L Griesbach del et lith.

Mintern Bros imp

OMOSAURUS

Dinosauria.

PLATE 72.

Omosaurus armatus.

Hæmal or under-view of the pelvis, with contiguous dislocated vertebræ and a right femur.

One eighth the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C. L. Griesbach del. et lith.

Mintern Bros. imp.

Dinosauria.

PLATE 73.

Omosaurus armatus.

Fig.

1. Hæmal or under surface of the ischium.
2. Proximal or acetabular end of the same.
3. Distal or symphysial end of the same.
4. Hæmal or under surface of the right pubis.
5. Neural or upper surface of the same.
6. Proximal end of the same.
7. Distal end of the same.
8. Hæmal or under surface of the pelvis of an Egyptian Lizard (*Uromastyx spinipes*)
9. Neural or upper surface of the same.

Figs. 8 and 9 are of the natural size; the other figures are two ninths the natural size.

The subjects of the latter are from the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C. L. Griesbach del. et lith.

OMOSAURUS

Mintern Bros imp.

Dinosauria.

PLATE 74.

Omosaurus armatus.

Fig.

1. Radial side of left carpal spine.
2. Anconal side of the same.
3. Fibular side of right tibia.
4. Popliteal side of the same.
5. Proximal end of the same.
6. Transverse section of narrowest part of the shaft of the same.

Figs. 1 and 2 are of the natural size; figs. 3—6 are one fourth the natural size.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

C. L. Griesbach del et lith. Mintern Bros imp

Dinosauria.

PLATE 75.

Omosaurus armatus.

Fig.

1. Section of the centrum of a sacral vertebra.
2. Base of the left carpal spine.
3. Section near the middle of the same.

From the Kimmeridge Clay at Swindon, Wilts. In the British Museum.

Fig: 1.

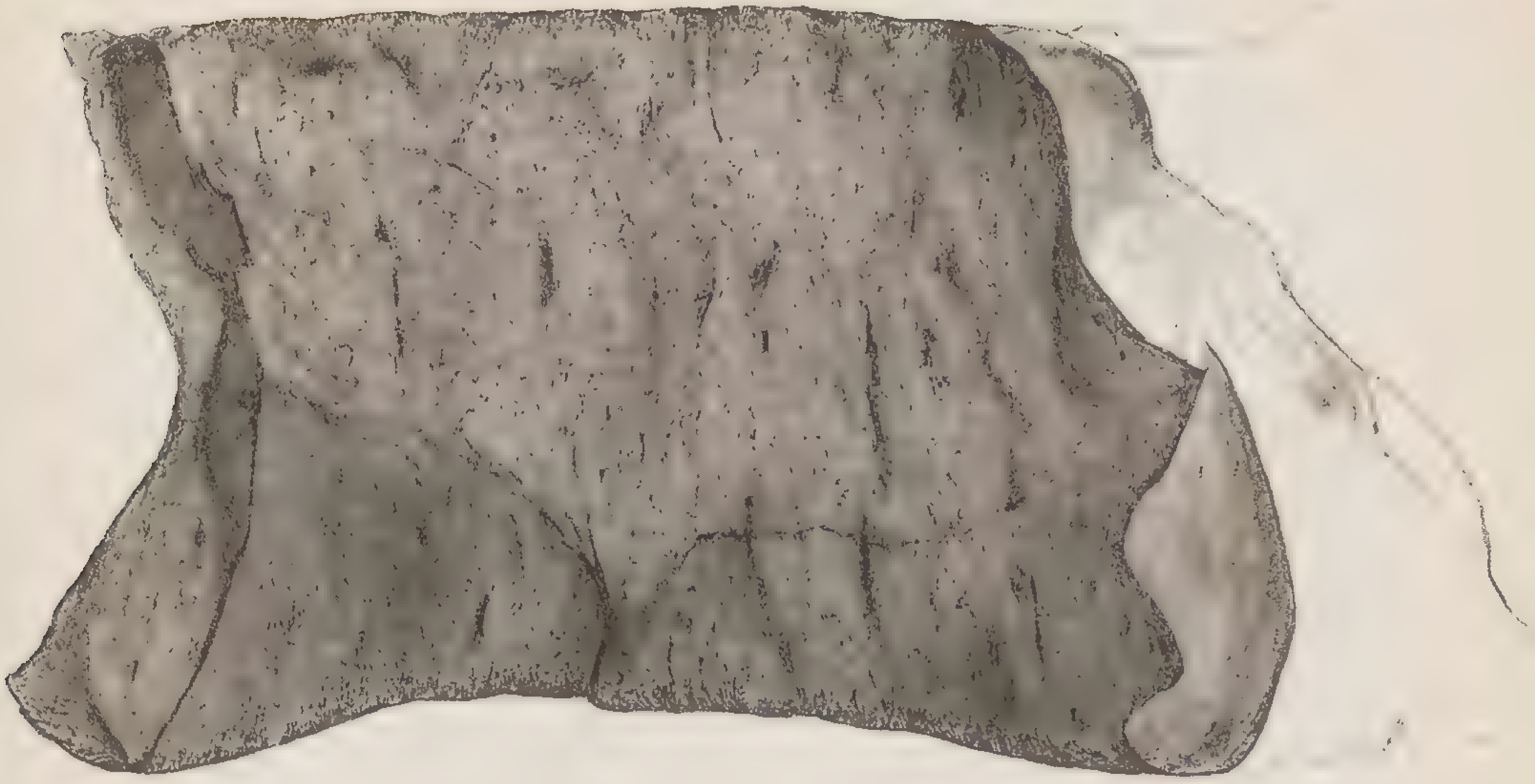


Fig: 2.

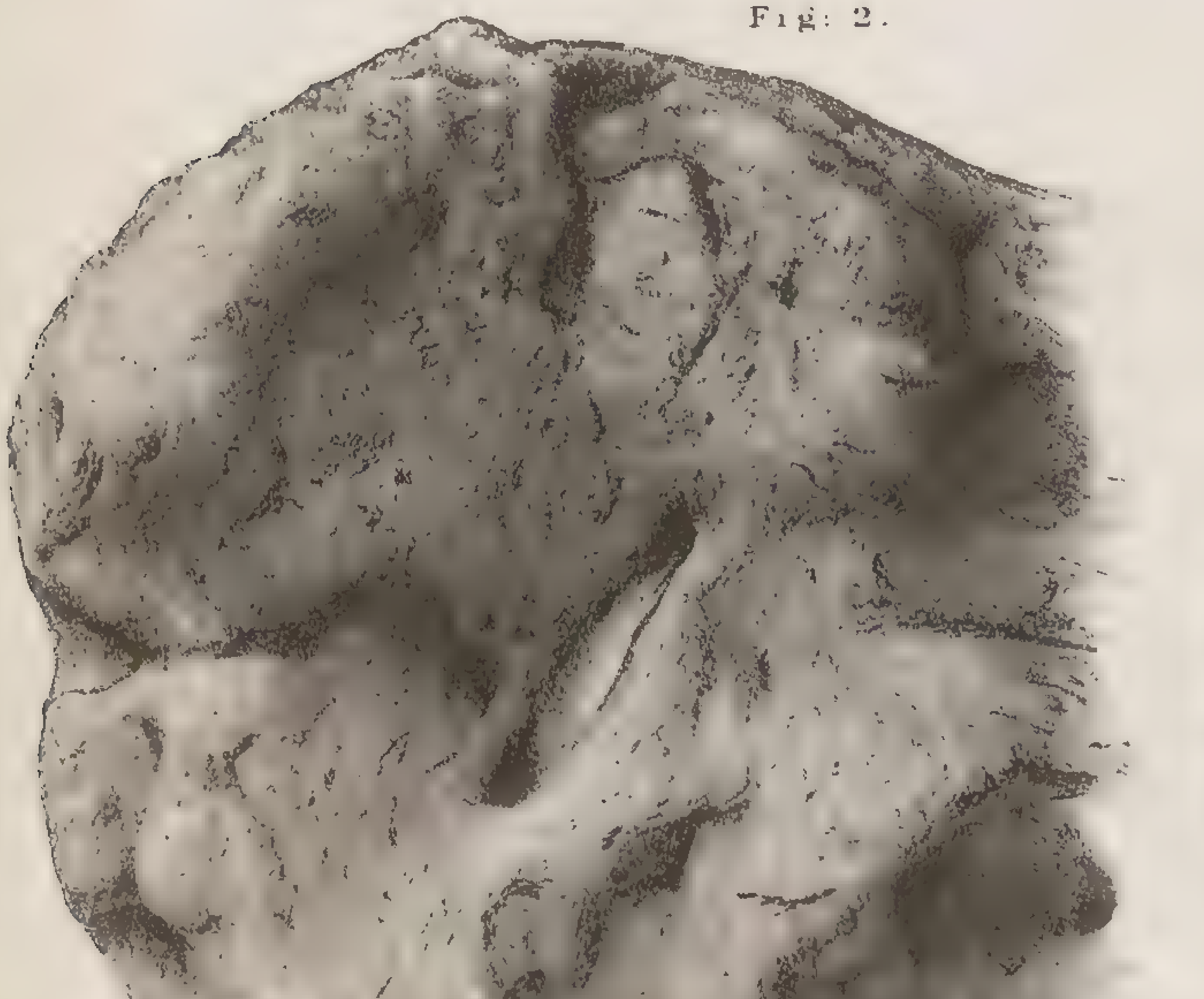


Fig: 3.

C.L. Griesbach del. et lith   Mintern Bros imp

OMOSAURUS

Dinosauria.

PLATE 76.

Cetiosaurus longus.

Fig.

1. Side view of dorsal vertebra.

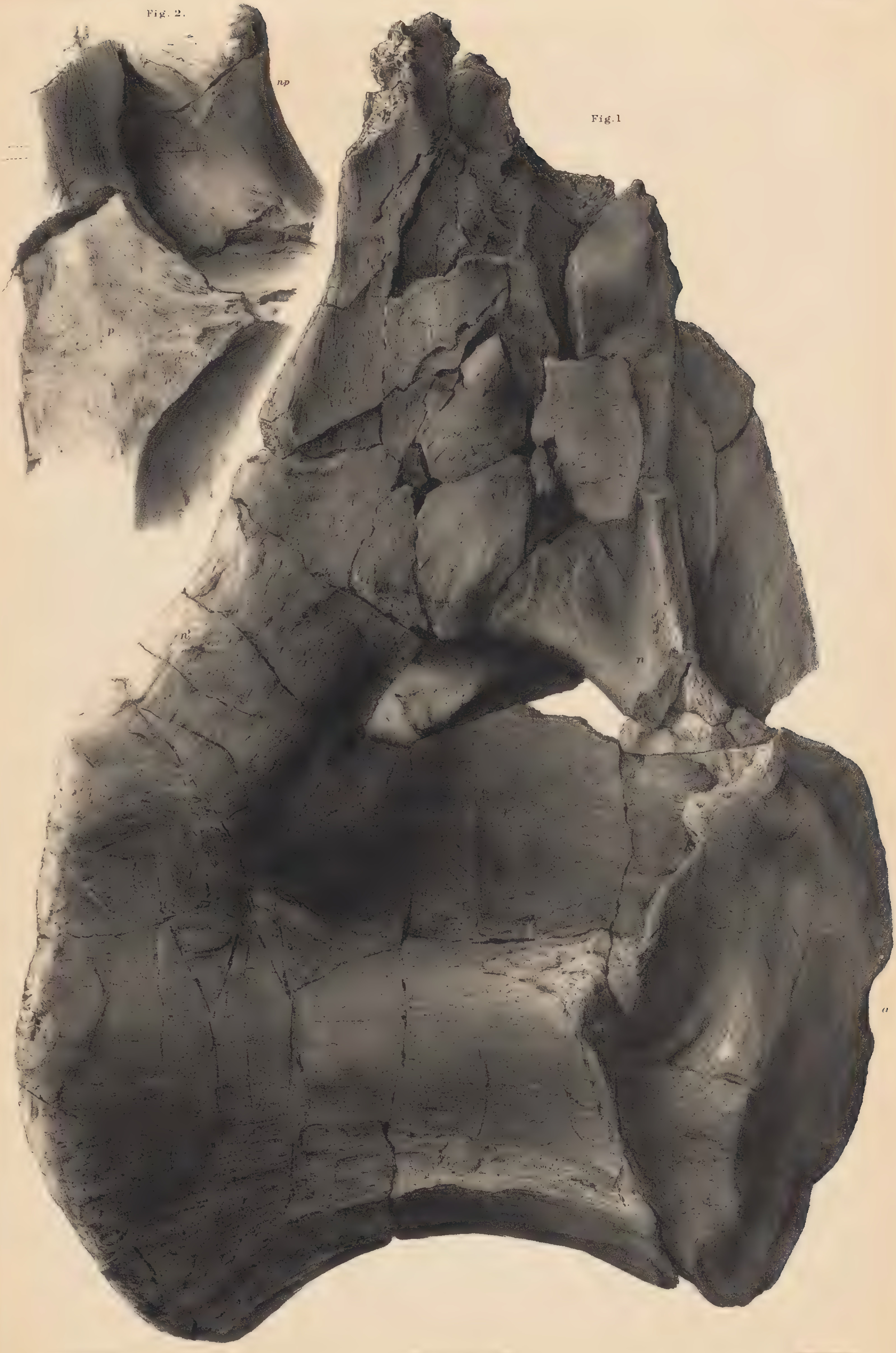
2. Section of part of the same, showing the dense bony texture.

Both figures are of the natural size.

From the Great Oolite at Kirtlington, Oxfordshire. In the Geological Museum, University of Oxford.

Fig. 2.

Fig. 1



Dinosauria.

PLATE 77.

Omosaurus hastiger.

Fig. 1. Articular surface of base of carpal spine : nat. size.
Fig. 2. Articular surface of base of tarsal spine of *Ornithorhynchus paradoxus*, magn.

The fossil is from the Kimmeridge Clay of Wootton Bassett, Wiltshire. In the British Museum.

Fig. 1

Fig. 2.

G. L. Griesbach del. et lith.

Omosaurus hastiger.

Mintern Bros. imp.

Dinosauria.

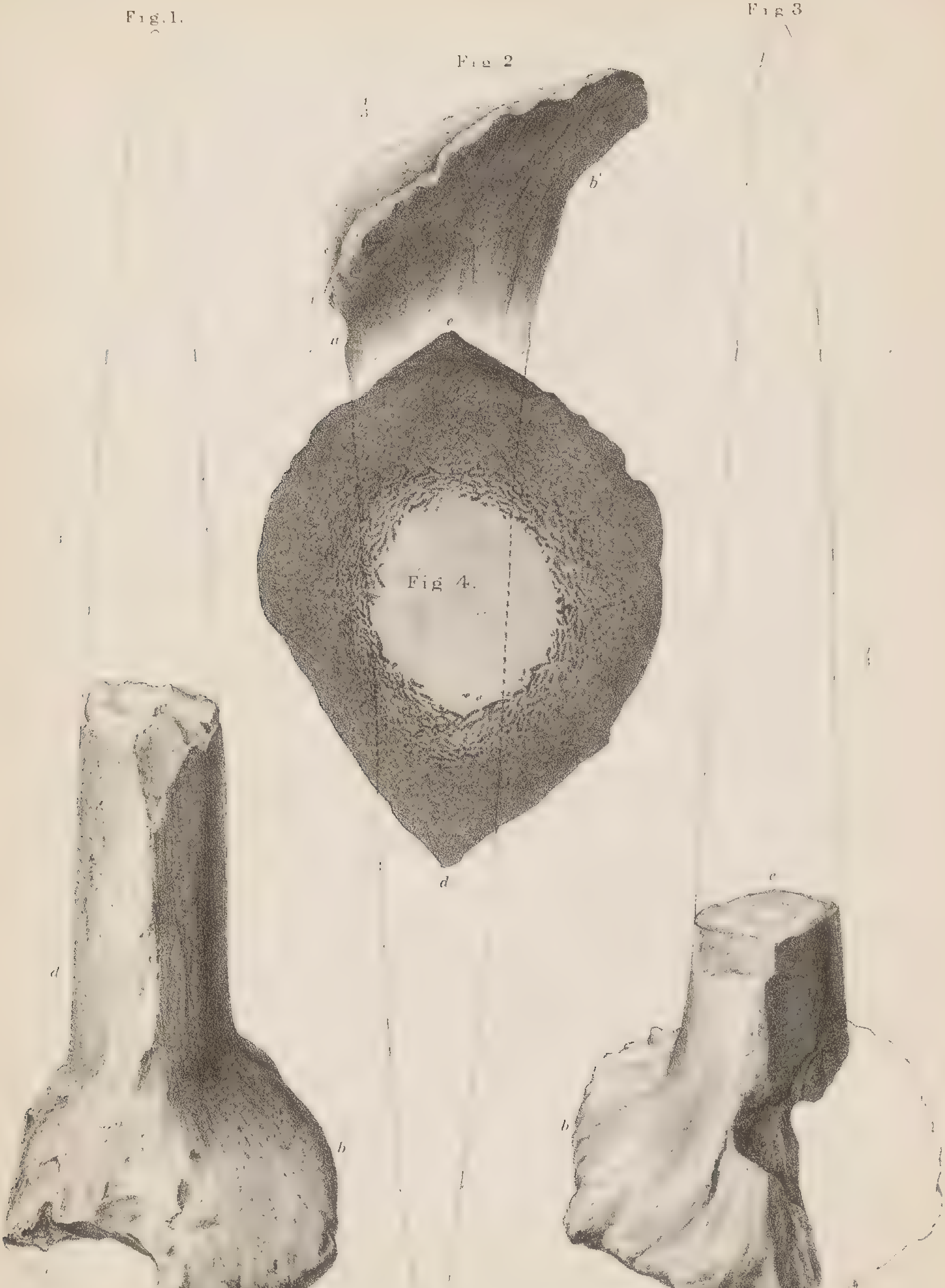
PLATE 78.

Omosaurus hastiger.

Fig.

1. Basal portion of right carpal spine, completed in outline: one third nat. size.
2. Side view of basal portion of right carpal spine, completed in outline: one third nat. size.
3. Basal portion of left carpal spine, completed in outline: one third nat. size.
4. Transverse section of body of left carpal spine, taken one third from the articular base: nat. size.

From the Kimmeridge Clay of Wootton Bassett, Wiltshire. In the British Museum.



Griesbach del. et lith

Omosaurus hastiger.

Mintern Bros imp

Dinosauria.

PLATE 79.

Chondrosteosaurus gigas.

FIG.

1. Under view of the centrum of an anterior trunk-vertebra: nat. size.
2. Reduced view of restored under surface of the same vertebra.

From the Wealden of the Isle of Wight. In the British Museum.

Fig 2.

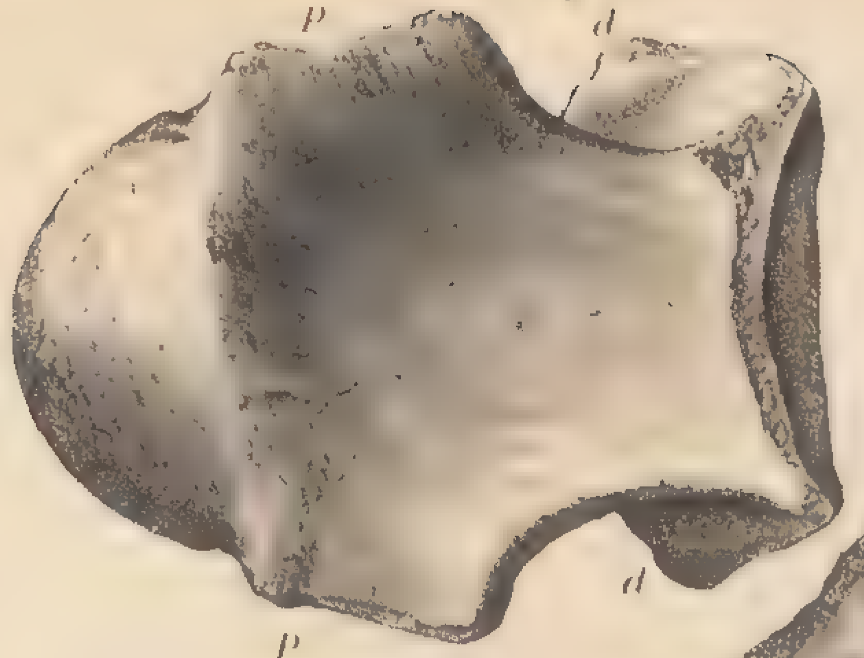
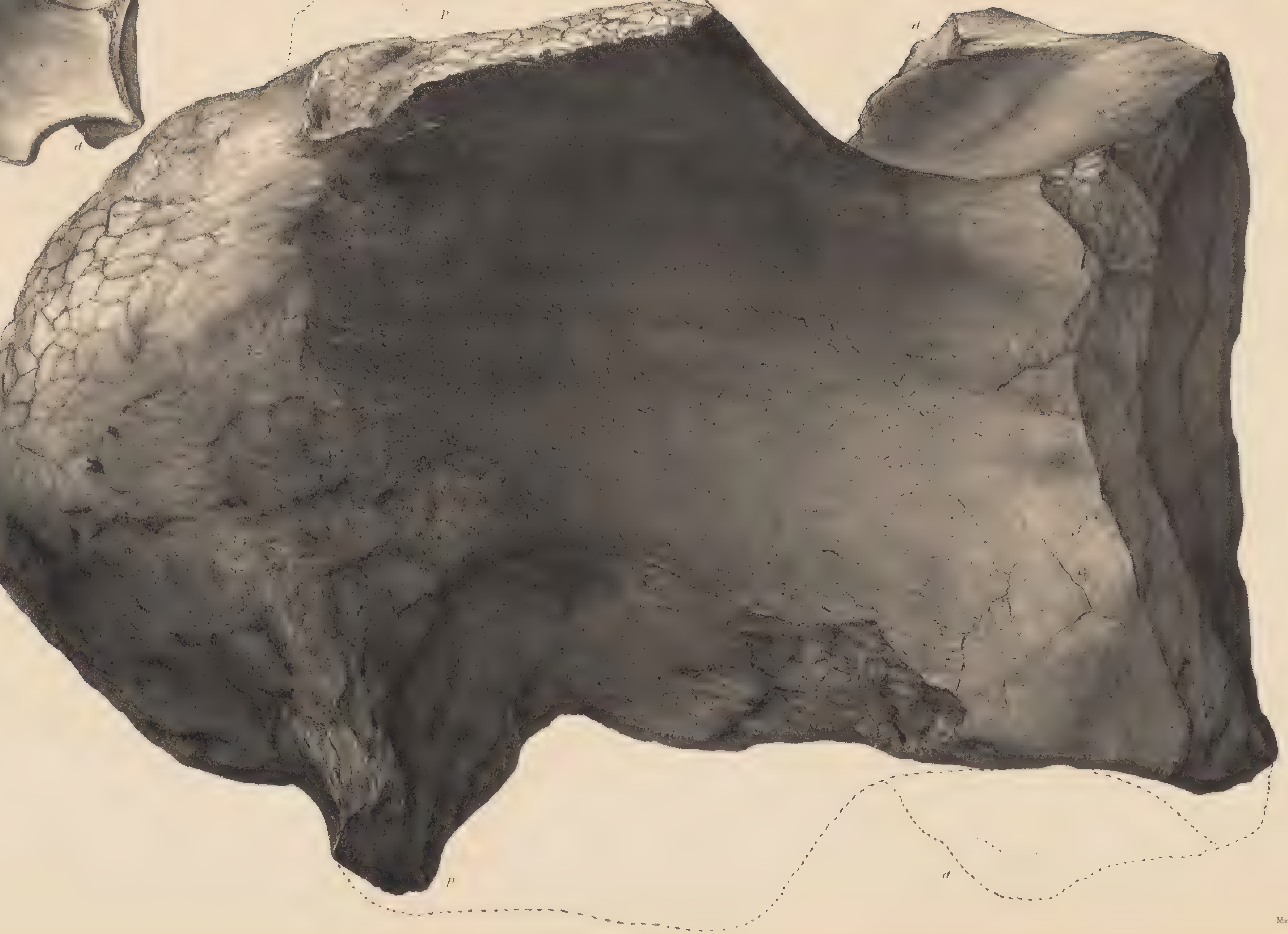


Fig 1.



Chondrosteosaurus gigas.

Mintern Bros imp.

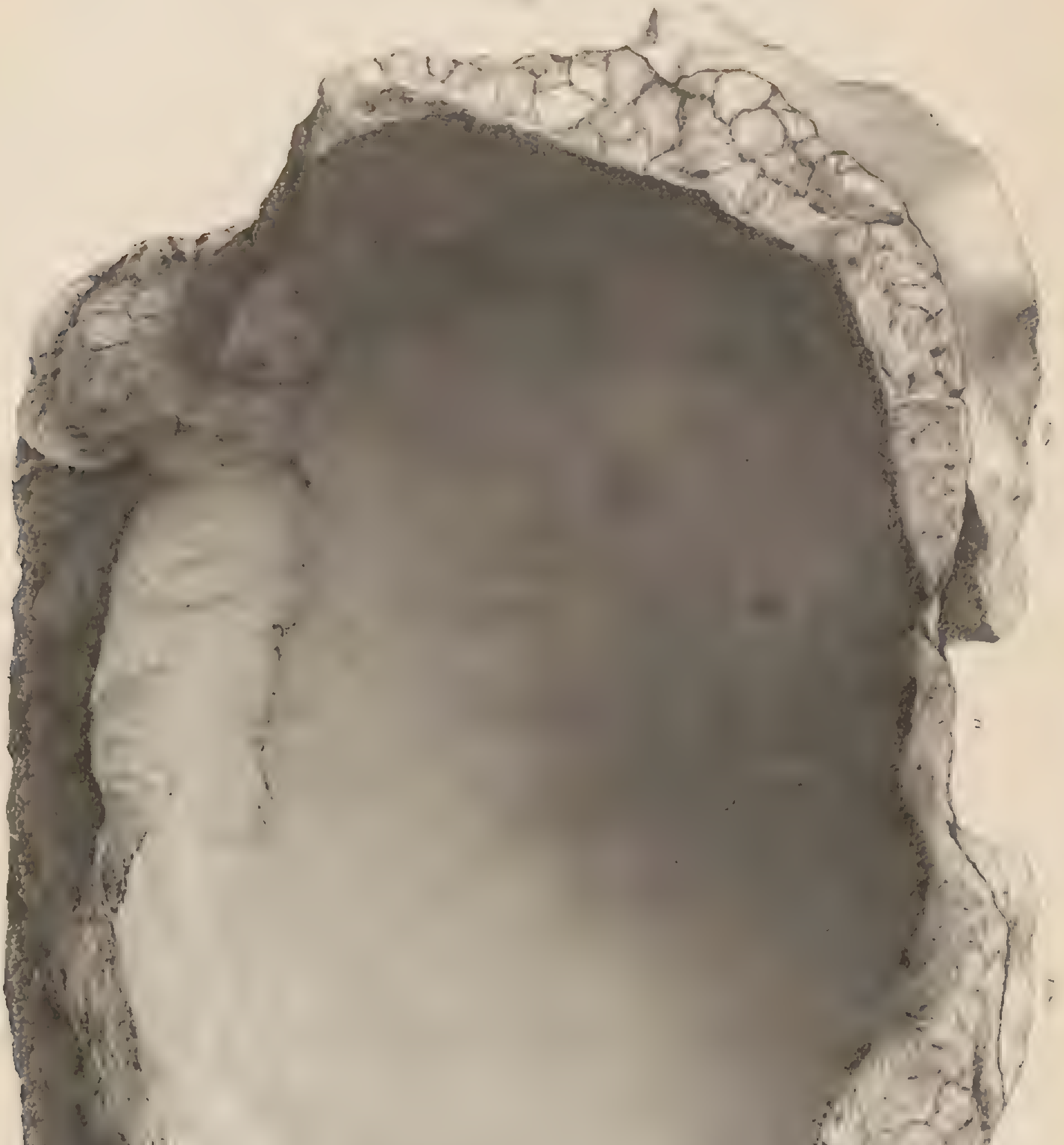
Dinosauria.

PLATE 80.

Chondrosteosaurus gigas.

Hinder articular surface of the centrum of an anterior trunk-vertebra: nat. size.

From the Wealden of the Isle of Wight. In the British Museum.



Chondrosteosaurus gigas.

Dinosauria.

PLATE 81.

Fig.

1. Neural surface of centrum of anterior trunk-vertebra of *Chondrosteosaurus gigas:* two thirds nat. size.
2. Hind surface of anterior trunk-vertebra of an Eagle (*Haliætus albicilla*) : nat. size.
3. Neural surface of the centrum of the same vertebra : nat. size.

The subject of fig. 1 is from the Wealden of the Isle of Wight. In the British Museum.

G. L. Greisbach del et lith

Mintern Bros imp

Figs. 1. Chondrosteosaurus gigas; 2, 3 Haliaetus albicilla.

Dinosauria.

PLATE 82.

Chondrosteosaurus gigas.

Fig.

1. Side view of centrum of an anterior trunk-vertebra: half nat. size.
2. Vertical longitudinal section of centrum of anterior trunk-vertebra: three fourths nat. size.

From the Wealden of the Isle of Wight. In the British Museum.

Fig. 1

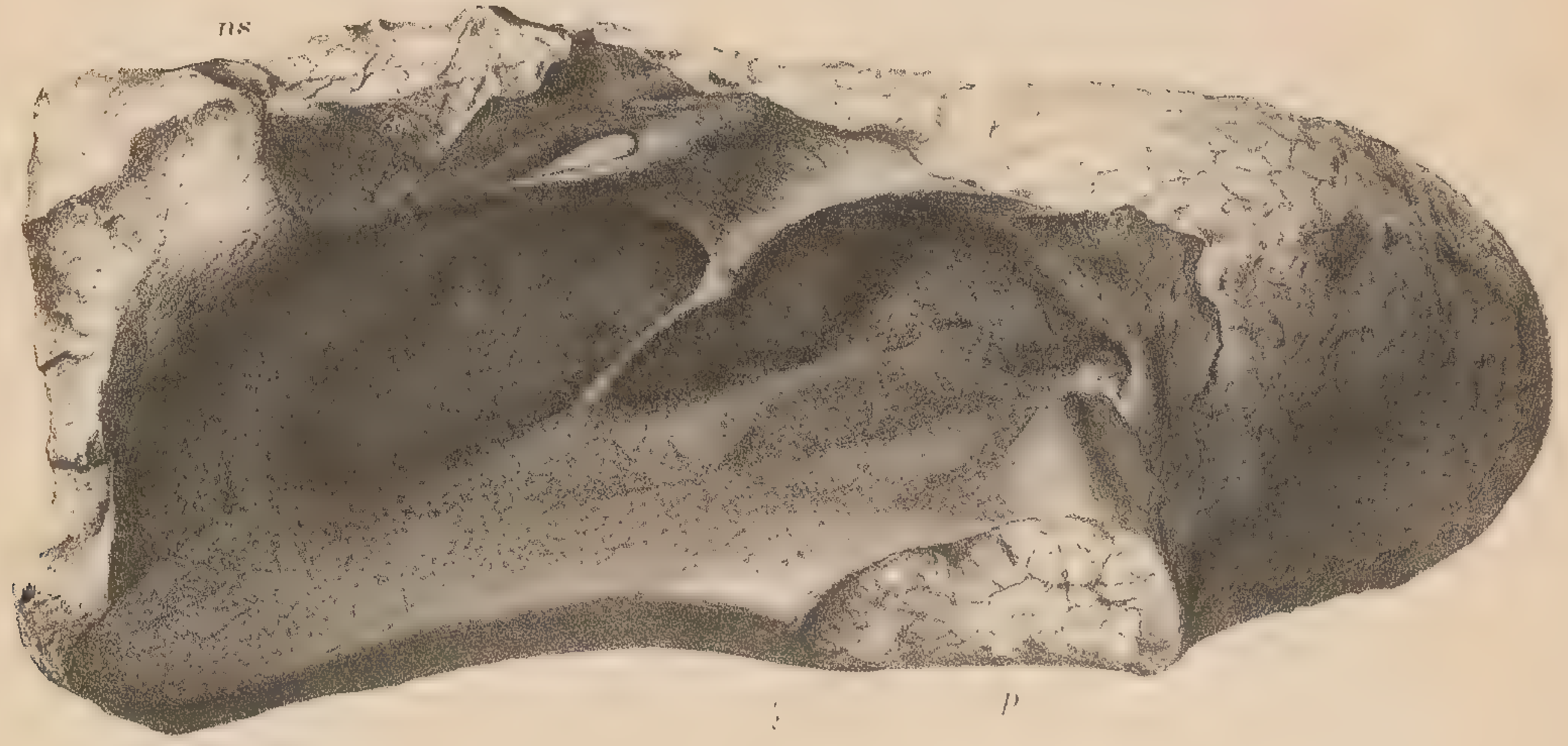


Fig. 2

$\frac{3}{1}$

C.L. Griesbach del et lith. Mintern Bros imp

Chondrosteosaurus gigas.

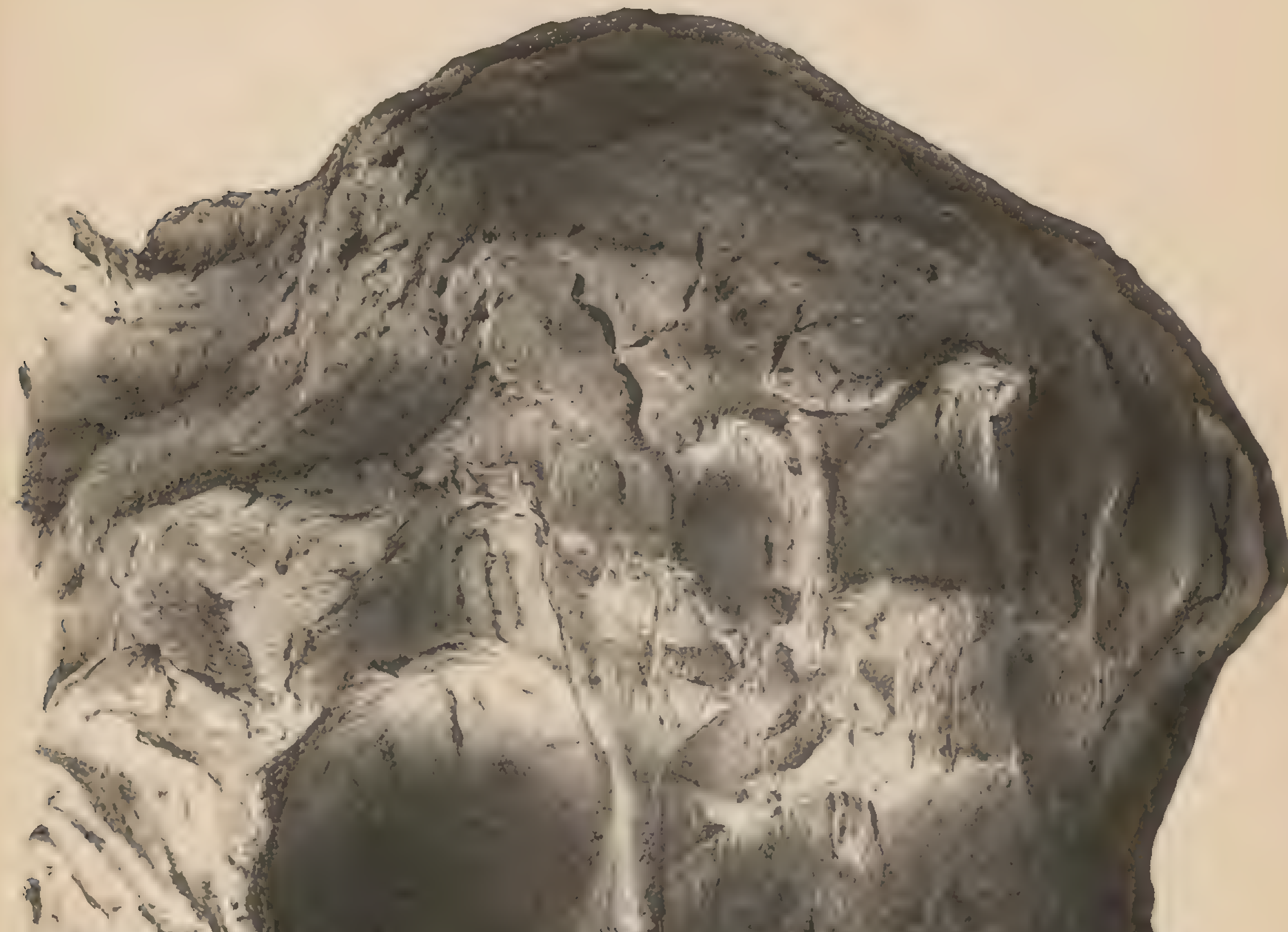
Dinosauria.

PLATE 83.

Chondrosteosaurus magnus.

Right side view of dorsal vertebra, natural size.

From the Wealden of the Isle of Wight. In the British Museum.



Chondrosteosaurus magnus.

Mintern Bros imp.

Dinosauria.

PLATE 84.

Chondrosteosaurus magnus.

Hind surface of a trunk-vertebra: nat. size.

From the Wealden of the Isle of Wight. In the Museum of the Rev. W. Fox, M.A., F.G.S.

L. Griesbach del et lith

Mintern Bros imp

Chondrosteosaurus magnus.

Dinosauria.

PLATE 85.

Chondrosteosaurus magnus.

Fig.

1. Fore end of mutilated centrum of dorsal vertebra.
2. Side view of crown of tooth of *Cardiodon rugulosus.*
3. Fore end of the same tooth.
4. Hind end of the crown of another tooth of *Cardiodon rugulosus.*
5. Magnified view of markings on the surface of the enamel of the same tooth.

All the figures are of the natural size.

The subject of fig. 1 is from the Wealden of the Isle of Wight. In the British Museum. Those of figs. 2—5 are from the Forest Marble of Bradford, Wilts. In the Collection of Channing Pearce, Esq., of that town.

C.L. Griesbach

Chondrosteosaurus magnus.

3 2044 072 221 518